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November 28, 2011

Via Electronic and Certified Mail

Lisa P. Jackson, Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: Petition to the Administrator to Make a Finding that Pennsylvania is Failing to Implement Requirements in its State Implementation Plan; and to Apply Sanctions Relating to these Failures

Dear Administrator Jackson:

Pursuant to the Administrative Procedure Act ("APA"), 5 U.S.C. § 553(e), and the Clean Air Act ("CAA"), 42 U.S.C. § 7401, *et seq.*, Clean Air Council ("CAC" or "Petitioners") hereby petitions the Administrator of the U.S. Environmental Protection Agency ("EPA") to: (1) make a finding that the Commonwealth of Pennsylvania is failing to implement the requirements of its state implementation plan ("SIP" or "Plan"); and (2) apply sanctions over the Commonwealth of Pennsylvania's failure to implement its SIP.

This petition is filed in response to the Pennsylvania Department of Environmental Protection's ("PA DEP" or "Department") ongoing failure to ensure adequate public notice and access to information before issuing plan approvals for the construction, modification, reactivation, and operation of sources of air pollution. Specifically, PA DEP is disregarding the current requirements of its applicable implementation plan related to public notice and contents of notice for plan approvals, and is instead implementing a "streamlined" process of issuing plan approvals. PA DEP's amended public notice requirements, found at 25 PA. CODE § 127.44–45 (2008), have not been approved by the EPA, do not meet the CAA minimum public availability of information requirements for SIP submittals, and frustrate the underlying purpose of public notice and comment procedures.

I. INTRODUCTION

a. Regulatory Background

PA DEP amended Pennsylvania's regulations relating to public notice of minor plan approvals on May 24, 2008.[1] PA DEP amended these requirements intending to streamline the permitting process and reduce response times for "minor permitting actions."[2] Yet in attempting to efficiently use scarce administrative resources, the Department has effectively removed any opportunity for meaningful public comment.

Specifically, PA DEP amended 25 PA. CODE § 127.44, *Public Notice* and 25 PA. CODE § 127.45, *Contents of Notice*. As amended, the PA DEP is no longer required to provide notice and a description of the analyses used for reaching a final decision on a proposed plan approval action for any permitting action deemed minor by DEP.[3] Under the amended procedure, a minor permitting action includes any source that is not: (1) subject to Subchapter D of Chapter 127 relating to prevention of significant deterioration of air quality; (2) subject to Subchapter E of Chapter 127 relating to new source review; (3) subject to Chapter 129 relating to sources of volatile organic compounds; (4) within a Title V facility; or (5) otherwise determined by the PA DEP to have substantial public interest.[4] For all minor plan approval actions, the PA DEP simply publishes a combined "notice of receipt and intent to issue" in the *Pennsylvania Bulletin.*[5] Concerned citizens impacted by the PA DEP's intent to issue plan approvals are only given an opportunity to review the plan approval application submitted by the industry applicant.[6] PA DEP does not grant access to application review memos, proposed plans, or other PA DEP analyses for minor plan approval actions.[7]

PA DEP's streamlined minor permitting action procedure is of particular concern to CAC as applied to the natural gas industry. From January through October of 2011, PA DEP issued over 2,800 permits for drilling in the Marcellus Shale.[8] In association with this significant boom in natural gas drilling, PA DEP is fielding an increased volume of plan approval applications for the construction or expansion of natural gas compressor stations which include impacts on air quality from the emission of volatile organic compounds, nitrogen oxide, particulates, and hazardous air pollutants. PA DEP has continually treated the issuance of plan approval permits for compressor stations as "minor permitting actions" and provided limited opportunity for public comment despite overwhelming public concern over the environmental impacts of the natural gas industry in Pennsylvania.

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[1] *See* Air Quality Permit Streamlining, 38 Pa. B. 2365 (May 24, 2008) [attached hereto as Exhibit 1].
[2] *Id.*
[3] *Compare* 25 PA. CODE § 127.45(a) (1)–(6) (2008), *with* 25 PA. CODE § 127.45(b)(6) (2008).
[4] *See* 25 PA. CODE § 127.44(b) (1)–(5) (2008).
[5] 25 PA. CODE § 127.45(a) (2008).
[6] *Id.*
[7] *Id.*
[8] PA DEP Bureau of Oil and Gas Management, Marcellus Shale Permits Issued & Wells Drilled (January – October 2011) (Nov. 8, 2011), http://www.dep.state.pa.us/dep/deputate/minres/oilgas/Marcellus%20Wells%20permitted-drilled%20OCTOBER%202011.gif.

The most recent EPA approved Pennsylvania regulations relating to public notice and contents of notice were approved on July 30, 1996.[9] Chapter 127 of the Pennsylvania environmental protection regulations related to the construction, modification, reactivation, and operation of sources are approved as part of Pennsylvania's SIP and codified as Pennsylvania's SIP in the Code of Federal Regulations.[10] All provisions of this SIP are intended to help Pennsylvania meet national ambient air quality standards under section 110 of the CAA, and 40 C.F.R. Part 51.[11] The public notice requirements at issue here are included within Chapter 127, Subchapter B, *Plan Approval Requirements* relating generally to all plan approvals under the PA DEP Air Quality Program. Subchapter B is included in Pennsylvania's SIP.[12]

Pennsylvania submitted a proposed SIP revision to EPA on April 14, 2009 that included the amendments to sections 127.44 and 127.45. Under the CAA, Pennsylvania's proposed SIP revision was deemed administratively complete by EPA determination or operation of law no later than October 14, 2009.[13] Subsequently, EPA was required to take final action on this proposed SIP revision by approving in full, disapproving in full, or approving in part and disapproving in part no later than October 14, 2010.[14] EPA has not taken any final action on the PA DEP's proposed SIP revision as of the writing of this petition. However, it is well settled law that when EPA has not taken final action on a proposed SIP revision, the most recently approved SIP remains in force as the applicable implementation plan.[15] This is true even where the EPA's inaction amounts to an unreasonable delay by failing to meet the timeline prescribed by the CAA.[16]

In light of the EPA's inaction on Pennsylvania's proposed SIP revision, all PA DEP actions taken pursuant to the 2008 amendments of section 127.44 and 127.45 are not in accordance with Pennsylvania approved SIP. Therefore, PA DEP is failing to implement the requirements of the Pennsylvania SIP by applying the streamlined permit review process to minor source permitting.

b. Petitioned Actions

Clean Air Council requests the Administrator exercise her authority under the CAA and issue findings that Pennsylvania is failing to implement its SIP and apply sanctions against the Commonwealth of Pennsylvania over these deficiencies. Specifically, Petitioners request that the Administrator:

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[9] *See* Identification of Plan, 40 C.F.R. § 52.2020 (2010); *and* Approval and Promulgation of Air Quality Implementation Plans; General Operating Permit and Plan Approval Program, 61 Fed. Reg. 39,597 (July 30, 1996).
[10] 40 C.F.R. § 52.2020(c).
[11] 40 C.F.R. § 52.2020(a).
[12] 40 C.F.R. § 52.2020(c).
[13] 42 U.S.C. § 7410(k)(1)(B) (2010).
[14] 42 U.S.C. § 7410(k)(2).
[15] *See General Motors v. United States* 496 U.S. 530, 540–41 (1990) (holding that an existing SIP remains the applicable implementation plan even after the State has submitted a proposed revision); *see also Environmental Defense v. EPA*, 467 F.3d 1329, 1337 (D.C. Cir. 2006) ("current SIPs remain in force until EPA grants formal approval to a revision.") (citing *Duquesne Light Co. v. EPA*, 698 F.2d 456, 471 (D.C. Cir. 1983)); *Clean Air Council v. Mallory,* 226 F. Supp. 2d 705, 722–23 (E.D. Pa, 2002).
[16] *General Motors*, 496 U.S. at 541.

1. Make a finding pursuant to 42 U.S.C. §§ 7410(m) and 7509(a)(4) of the CAA that requirements of Pennsylvania's SIP are not being implemented by PA DEP with regards to the issuing of plan approvals under the Air Quality Program, both inside and outside of designated nonattainment areas, within the Commonwealth of Pennsylvania;

2. Apply the sanctions set forth at 42 U.S.C. § 7509(b) against the Commonwealth of Pennsylvania in accordance with requirements of 42 U.S.C. §§ 7410(m) and 7509(a)(4). Petitioners request the Administrator exercise her discretion to apply sanctions, where allowed, and where application of sanctions are nondiscretionary, to apply them as expeditiously as possible. Petitioners further request the Administrator withhold CAA section 105 grant funding from Pennsylvania, as authorized by 42 U.S.C. § 7509(a)(4), unless and until Pennsylvania rectifies its finding of failure to implement its SIP.

Clean Air Council requests that EPA expedite resolution of this matter and respond within sixty days. This request is reasonable given the public health and welfare implications of PA DEP's failure to meet basic CAA requirements. APA section 553(e) provides that "[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule." (Hereinafter "APA Petition").[17] "With regard for the convenience and necessity of the parties...and within a reasonable time, each agency shall proceed to conclude a matter presented to it," including an APA Petition.[18] If an agency fails to respond within a "reasonable time," an aggrieved part may seek judicial review in an effort to "compel agency action unlawfully withheld or unreasonably delayed."[19] Should EPA fail to make a finding that Pennsylvania is failing to implement its SIP within sixty days, Petitioners will consider such delay unreasonable.

II. Petitioner

Clean Air Council is a non-profit environmental organization headquartered at 135 S. 19th St., Suite 300, Philadelphia, Pennsylvania 19103. For more than 40 years, the Council has fought to improve the air quality across Pennsylvania. The Council's mission is to protect everyone's right to breathe clean air. Clean Air Council has members throughout Pennsylvania.

III. The Administrator's Duties and Authorities Under the Clean Air Act

Clean Air Council petitions the Administrator of the EPA pursuant to the APA.[20] The APA specifically requires that "[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule."[21] Under the APA the EPA must within a reasonable time proceed to conclude a matter presented to it.[22]

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[17] 5 U.S.C. § 553(e) (2010).
[18] 5 U.S.C. § 555(b).
[19] 5 U.S.C. § 706(1).
[20] *See* 5 U.S.C. § 551, *et seq.*
[21] 5 U.S.C. § 553(e).
[22] *See* 5 U.S.C. § 555(b). *See also* 5 U.S.C. § 555(e) ("Prompt notice shall be given of the denial...of a ....petition.").

The SIP is the backbone for protecting and improving a state's air quality. Pursuant to the CAA, individual states develop SIPs in order to attain and maintain health and welfare-based National Ambient Air Quality Standards ("NAAQS") promulgated by the EPA.[23]

The CAA requires that each implementation plan submitted by a State include a program to provide for the regulation of modification and construction of any stationary source within the area controlled by the plan.[24] Each SIP must also set forth legally enforceable procedures that require the state or local agency to provide opportunity for public comment on applications for the approval of construction or modification of sources, including public access to information.[25] Available information must include "the agency's analysis of the effect of construction or modification on ambient air quality, including the agency's proposed approval or disapproval."[26]

Pennsylvania's SIP includes requirements for the approval of construction, modification, and operation of sources codified at 25 PA. CODE §§ 127.1–127.802, approved by the EPA on July 30, 1996.[27] As approved in Pennsylvania's SIP, the PA DEP is required to prepare a notice of action to be taken on applications for plan approvals for all sources required to obtain plan approvals.[28] The public notice must state the conditions being placed in the plan approval, provide a description of the PA DEP's reasons for including these conditions, and provide a description of the analyses for reaching a final decision on the proposed plan approval action.[29] There is no streamlined procedure for minor permitting actions approved in the Pennsylvania SIP.

The Administrator is authorized under the CAA to make a finding that a state is failing to implement its SIP.[30] Such a finding can be made when the Administrator "finds that any requirement of an approved plan" required under Title I, Part D of the CAA relating to nonattainment areas is not being implemented.[31] Further, the Administrator is authorized to make a finding of a failure to implement in relation to any plan required under Subchapter I of the CAA.[32] Thus, the Administrator has the authority to make a finding that a state is failing to implement any requirement of a SIP both within and outside of areas designated as nonattainment.

While a duty to make a finding that a state is failing to implement any requirement of a SIP is discretionary, once a finding of failure to implement a SIP in a nonattainment area is made,

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[23] *See* 42 U.S.C. § 7410(a)(1).
[24] 42 U.S.C. § 7410(a)(2)(C).
[25] *See* 40 C.F.R. §§ 51.160 and 51.161.
[26] 40 C.F.R. Part 51, *Requirements for Preparation, Adoption, and Submittal of Implementation Plans*; Subpart I, *Review of New Sources and Modifications;* Section 51.161(a), *Public Availability of Information.*
[27] *See* 40 C.F.R. § 52.2020 (2010); *and* 61 Fed. Reg. 39,597 (July 30, 1996) (granting final approval to Pennsylvania's Operating Permit and Plan Approval Programs pursuant to Section 110 of the Clean Air Act for the purpose of creating Federally enforceable operating permit and plan approval conditions for sources of criteria air pollutants).
[28] *See* 25 PA. CODE § 127.44(a)(5) (1994).
[29] *See* 25 PA. CODE § 127.45 (1994).
[30] *See* 42 U.S.C. § 7509(a)(4).
[31] *Id.*
[32] 42 U.S.C. § 7410(m).

sanctions must follow in accordance with section 7509(b) of the CAA.[33] For a finding of failure to implement a SIP outside of a nonattainment area, the Administrator may, at her discretion, at any time, apply any sanctions provided in section 7509(b) as she determines reasonable and appropriate to ensure the requirements of the SIP are met.[34]

The Administrator therefore has the authority and the obligation to undertake the petitioned actions under the CAA. As will be explained in greater detail below, there is ample justification for the Administrator to make the requested findings and apply the requested sanctions.

IV. Support for Petitioned Actions

a. Failure to Implement Public Notice and Contents of Notice Requirements in the Pennsylvania SIP

The purpose of the Clean Air Act is, among other things, "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population."[35] This objective is clearly furthered by encouraging public participation in the execution of the CAA and continuing to provide the public with information about all plan approvals for construction or modification of sources that could negatively impact the public health, welfare, and environmental quality. To that end, the CAA requires that each state develop a SIP that includes regulations of construction and modification of any stationary source necessary to assure that the NAAQS are achieved.[36] Such regulations must include procedures to adequately support public participation and the public availability of information.[37]

The EPA approved SIP for Pennsylvania includes regulations requiring public participation during the plan approval process for the construction, modification, reactivation, and operation of sources.[38] The current SIP approved requirements were proposed by Pennsylvania in 1994 and approved by EPA in 1996.[39] The 2008 PA DEP proposed SIP revisions have not yet been approved by the EPA. Due to the EPA's lack of final action with regard to Pennsylvania's proposed SIP revision, the 1994 public notice regulations remain in effect as the applicable implementation plan requirements. Therefore, PA DEP is failing to implement the applicable implementation plan.

The U.S. Supreme Court's decision in *General Motors v. United States*, 496 U.S. 530 (1990) was clear that the existing SIP remains the applicable implementation plan even after a state submits a proposed SIP revision.[40] That decision broadened EPA authority to take enforcement actions

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[33] "[U]nless such deficiency has been corrected within 18 months after the finding, disapproval, or determination referred to in paragraphs (1), (2), (3), and (4), one of the sanctions referred to in subsection (b) of this section shall apply . . ." 42 U.S.C. § 7509(a).
[34] *See* 42 U.S.C. § 7410(m).
[35] 42 U.S.C. § 7401(b)(1).
[36] 42 U.S.C. § 7410(a)(2)(C).
[37] *See* 40 C.F.R. § 51.161.
[38] *See* 40 C.F.R. § 52.2020; *see also* 61 Fed. Reg. 39,597 (July 30, 1996).
[39] 61 Fed. Reg. 39,597 (July 30, 1996).
[40] *General Motors*, 496 U.S. 530.

while proposed revisions are still pending despite a delay in the SIP review. Following the *General Motors* decision, the CAA was amended to clarify the review period allowed for proposed SIP revisions. Subsequently, EPA issued a revised guidance document to EPA Regional Offices concerning enforcement during pending SIP revisions.[41] This guidance document clarifies that after the 1990 CAA amendments, EPA may continue to enforce existing SIPs even where there has been unreasonable delay in the review of a proposed SIP revision.[42]

The holding of *General Motors* regarding the federal enforcement provisions in section 113 of the CAA should equally apply to EPA findings of a state's failure to implement requirements of its plan under section 179 of the CAA. *General Motors* addressed whether EPA is prevented from enforcing an existing SIP when it fails to complete its review of a proposed SIP revision in a timely manner.[43] Under section 113(a)(1) of the CAA, 42 U.S.C. § 7413(a)(1), the EPA may bring an enforcement action whenever a person is in violation of any requirement or prohibition of an applicable implementation plan. Relying on the definition of "applicable implementation plan," the Supreme Court held that the existing SIP remains the "applicable implementation plan" even after the State has submitted a proposed revision.[44] The CAA defines "applicable implementation plan" as:

> The portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 7410 of this title, or promulgated under section 7410(c) of this title, or promulgated or approved pursuant to regulations promulgated under section 7601(d) of this title and which implements the relevant requirements of this chapter.[45]

Section 179(a)(4) of the CAA, 42 U.S.C. § 7509(a)(4), authorizes the EPA to issue a finding that "any requirement of an approved plan (or approved part of a plan) is not being implemented."[46] The meaning of "approved plan" under this section should be read under the same definition of "applicable implementation plan" which applies to the entire CAA and stresses the plan's approval or promulgation under the provisions of the CAA. Therefore, *General Motors* should apply equally to the EPA's authority to issue a finding that a state has failed to implement any requirement of an approved plan as it does to EPA's authority to enforce an applicable implementation plan against a person under section 113(a). There is nothing in the CAA which limits EPA authority to issue a finding of failure to implement to circumstances where EPA has not unreasonably delayed action on a proposed SIP revision.

By applying the streamlined permitting process for minor permitting sources contained in Pennsylvania's proposed SIP revision, PA DEP is failing to implement the requirements of Pennsylvania's approved plan.

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[41] Memorandum from Michael S. Alushin U.S. EPA Associate Enforcement Counsel for Air to Regional Counsels for all Regions, Revised Guidance on Enforcement During Pending SIP Revisions (March 1, 1991) *available at* http://www.epa.gov/compliance/resources/policies/civil/caa/stationary/enf-siprev-rpt.pdf.
[42] *Id.* at 2.
[43] *General Motors*, 496 U.S. at 532.
[44] *Id.* at 540.
[45] 42 U.S.C. § 7602(q).
[46] 42 U.S.C. S 7509(a)(4).

1. *Pennsylvania's Amended Public Notice Requirements Do Not Meet Minimum Requirements for Public Availability of Information and Curtail Opportunity for Effective Public Participation*

The Pennsylvania Environmental Quality Board ("PA EQB") approved amendments to Chapter 127 of the Pennsylvania Environmental Protection regulations on May 24, 2008.[47] The PA EQB made these amendments to streamline the air quality permitting process, reduce the plan approval application time and unnecessary costs to industry, and have faster response times for minor permitting actions.[48]

Under the currently approved Pennsylvania SIP requirements, the PA DEP must prepare a notice of action to be taken on applications for plan approvals for all sources required to obtain plan approval.[49] The contents of the notice must include the conditions being placed in the plan approval and a brief description of the PA DEP's reasoning for these conditions, including references to applicable State and Federal requirements.[50]

Pennsylvania's proposed SIP revisions change these public notice and content of notice requirements in several key ways. First, the revisions create a new "minor permitting action" classification for which the PA DEP is no longer required to prepare a full notice of action to be taken on plan approval applications. Instead, the PA DEP will publish a combined "notice of receipt and intent to issue" for each plan approval application.[51] No future "intent to issue" notice will follow under this procedure. As a result of this combined notice, the PA DEP review memorandum analyzing the plan approval application is completed concurrently with the final permit. The PA DEP will not prepare, or release a detailed *proposed* plan approval. Second, the contents of notice for a "minor permitting action" will no longer include a description of the conditions being placed in the plan approval.[52] Instead, the notice will generally state the *type* of conditions that will be placed in the plan approval.[53] For instance "the Plan approval and Operating Permit will include testing, monitoring, record keeping, and record keeping requirements designed to keep the sources operating within all applicable air quality requirements."[54] This does not provide the public with adequate information to comment on PA DEP action with regard to a proposed plan approval as it is entirely unclear what emissions limitation conditions will be placed on a facility.

The proposed SIP revisions relating to public notice and contents of notice for plan approval applications for the construction, modification, reactivation, and operation of sources do not meet the minimum federal requirements for public access to information in SIPs, and frustrates the underlying purpose of public notice and comment procedures.

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[47] Air Quality Permit Streamlining, 38 Pa. B. 2365 (May 24, 2008).
[48] *Id.*
[49] 25 PA. CODE § 127.44(a)(5) (1994).
[50] 25 PA. CODE § 127.45(5) (1994).
[51] *See* 25 PA. CODE § 127.44(a) (2008).
[52] *See* 25 Pa. Code § 127.45(a) (1)–(6) (2008).
[53] *See* 25 Pa. Code § 127.45(a)(3)(iii) (2008).
[54] Air Quality Plan Approval and Operating Permit Applications New Sources and Modifications, 41 Pa. B. 3870 (July 16, 2011).

Regulations implementing the requirements of the CAA detail the requirements for preparation, adoption and submittal of implementation plans required under section 110 of the CAA. Specifically, 40 C.F.R. § 51.161 requires that each implementation plan requirements for the review of new sources and modifications include procedures for public availability of information.[55] State or local agencies must provide information that includes "the agency's analysis of the effect of construction or modification on ambient air quality, including the agency's proposed approval or disapproval."[56] Pennsylvania's proposed SIP revision fails to meet this minimum requirement.

Furthermore, Pennsylvania's amended streamlined permitting procedure removes transparency from the permitting process and does not allow the public access to information that may impact public health and welfare, including, but not limited to: proposed emission conditions, PA DEP's analysis of plan approvals, emissions quantities and impact on ambient air quality, and other documents used in the evaluation of plan approvals. During the public comment and public hearing period for the PA EQB's air quality permit streamlining amendments, several commentators, including Petitioner, submitted testimony detailing their concerns about this streamlined process.[57] Several commentators noted that these amendments will "severely curtail opportunities for effective citizen participation in air permitting."[58] In response, the PA EQB explained that the streamlined process is designed for "certain minor sources for which there is typically little public interest and for which the Department usually does not receive comment."[59] However, the PA DEP has continually treated all natural gas operations as minor sources and has accordingly applied this streamlined process. Concerns over the public health and environmental quality impacts from the natural gas industry have continued to receive fervent citizen, political and media attention at the local, regional, and national level. By categorizing natural gas plan approvals as "minor sources for which there is typically little public interest and for which the Department usually does not receive comment," the PA DEP is not making a good faith effort to fully inform concerned citizens about the construction or modification of natural gas facilities.

2. *Clean Air Council File Reviews*

The PA DEP is currently and continually issuing plan approval notifications under the streamlined notice of receipt and intent to issue plan approvals procedure. Therefore, PA DEP is failing to implement the requirements of Pennsylvania's approved SIP which requires publication of a notice of action to be taken at each stage of applications for plan approvals, for all sources required to obtain plan approval.[60]

On July 16, 2011, PA DEP issued a notice in the *Pennsylvania Bulletin* of Receipt of Plan Approval Applications and Intent to Issue Plan Approvals for four separate applications made by

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[55] 40 C.F.R. § 51.161(a).
[56] *Id.*
[57] *See* Pennsylvania Air Quality Permit Streamlining Comment/Response Document, 37 Pa. B 1317 (March 24, 2007) [attached hereto as Exhibit 2].
[58] *Id.* at 10.
[59] *Id.* at 9, 11.
[60] 25 PA. CODE § 127.44(a)(5) (1994).

Laser Northeast Gathering Co., LLC.[61] On July 15, 2011, Petitioner submitted a formal request with the Northeast Region PA DEP Air Quality office to complete a file review of these four applications. In communications with Ray Kempa, New Source Review Chief for the Northeast Region, CAC was informed via email that pursuant to section 127.44, a review memo would only be completed concurrently with the preparation of the final permit and that a file review will be limited to the contents of the plan approval application.[62] During the file review, only the plan approval application prepared by Laser Northeast Gathering Co, LLC was made available.[63] CAC submitted written comments to the Northeast Region regarding these plan approvals and noted objections to PA DEP's failure to provide the public with adequate opportunity to comment.[64]

In a similar action, PA DEP issued a notice in the *Pennsylvania Bulletin* of Receipt of Plan Approval Applications and Intent to Issue Plan Approvals for Laser Northeast Gathering Co., LLC for the construction of the Shields Compressor Station on September 3, 2011.[65] Again, during the file review for this application, CAC was only able to obtain the plan approval application prepared by Laser Northeast Gathering Co., LLC.[66] CAC submitted written comments to the Northeast Region regarding this plan approval and noted objections to PA DEP's failure to provide the public with adequate opportunity to comment.[67] Despite the PA DEP's classification of the construction of this compressor station as a minor permitting action with little public interest, the amount of comments filed by area residents concerned about the public health impacts of this facility was voluminous enough to warrant a public hearing.[68]

These particular instances in which PA DEP issued combined notice of receipt of application and intent to issue plan approval for a minor permitting action demonstrate the PA DEP's continued use of the 2008 streamlined permitting procedure. These procedures, while included in Pennsylvania's proposed SIP revision, have not been approved by the EPA. Therefore, Pennsylvania is failing to implement the requirements of its approved plan.

b. Sanctions

Upon making a finding that a state is failing to implement its SIP, the Administrator has a nondiscretionary duty to apply the sanctions set forth under section 179(b) of the CAA, unless

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[61] Air Quality Plan Approval and Operating Permit Applications New Sources and Modifications, 41 Pa. B. 3870 (July 16, 2011) (Plan Approval Nos.: 58-399-016; 58-399-017; 58-399-018; 58-399-019) [attached hereto as Exhibit 3].

[62] *See* Exhibit 4 [attached].

[63] *See* Exhibit 5 [attached].

[64] *See* Clean Air Council Comments Regarding Laser Northeast Gathering Co, LLC. Plan Approval Nos.: 58-399-016; 58-399-017; 58-399-018; 58-399-019 (August 15, 2011) [attached hereto as Exhibit 6].

[65] Air Quality Plan Approval and Operating Permit Applications New Sources and Modifications, 41 Pa. B. 4777 (September 3, 2011) (Plan Approval No.: 58-399-023) [attached hereto as Exhibit 7].

[66] *See* Exhibit 8 [attached].

[67] Clean Air Council Comments Regarding Laser Northeast Gathering Co. LLC. Plan Approval No. 58-399-023 (October 3, 2011) [attached hereto as Exhibit 9].

[68] *See* Public Notification to Solicit Comment on Laser Northeast, http://pa.mypublicnotices.com/PublicNotice.asp?Page=PublicNotice&AdId=2555765 (Nov. 11, 2011) (providing a copy of the PA DEP notice of public hearing for Plan Approval Application No. 58-399-023 published in the Scranton Times on Oct. 30, 31, and Nov. 1, 2011).

such deficiency is corrected by a state within 18 months of the finding, if such finding relates to a SIP or SIP revision required under Title I, Part D of the CAA, which relates to nonattainment areas. In this case, it is clear that Pennsylvania is failing to implement its SIP with regards to the public notice requirements for the issuance of plan approvals for stationary sources in nonattainment areas. These permitting requirements are required to be in the SIP in accordance with 42 U.S.C. §§ 7502(c)(7) Title I, Part D of the CAA. Thus, in making a finding that Pennsylvania is failing to implement its SIP, the Administrator must also apply the sanctions in 42 U.S.C. § 7509(b) against the State.

Additionally, upon on making a finding that a state is failing to implement its SIP, the Administrator has the discretion to apply the sanctions set forth at 42 U.S.C. § 7509(b) with regards to any other SIP requirement not otherwise required under Title I, Part D of the CAA or applicable specifically to nonattainment areas. In this case, Petitioners submits that there is ample justification for the Administrator to apply sanctions against Pennsylvania over its ongoing failure to implement its SIP statewide. Despite clear laws and guidance from EPA, PA DEP has failed to properly provide for public notice and meaningful opportunity for comment throughout the plan approval process for the construction, modification, reactivation, or operation of sources. PA DEP does not appear to be making a good faith effort to ensure its public notice procedures for the issuance of plan approvals for oil and gas operations, and other facilities impacting air quality is consistent with the CAA. Sanctions are needed to rein in Pennsylvania's obvious flouting of the law.

EPA further has discretion to withhold grant funding under CAA § 105 in response to a finding of failure to implement a SIP.[69] Petitioners further request that the EPA withhold CAA § 105 grant funding from Pennsylvania unless and until PA DEP assures full and consistent implementation of its SIP permitting requirements with regards to public notice and contents of notice in plan approval actions. In fact, it would be wholly inappropriate for EPA to continue to provide grants to PA DEP under CAA § 105 that would fund illegal permitting practices.

V. Conclusion

Pennsylvania continues to ignore the requirements of the Clean Air Act, its implementing regulations, and its currently approved SIP with regard to the public notice and content of notice requirements in the plan approval process. The Administrator cannot allow this to continue.

There is ample justification for the Administrator to make the requested findings, to apply the required sanctions, and to exercise discretion and apply additional sanctions. The purpose of the Clean Air Act in protecting public health and welfare is only effective when the public is fully informed of proposed agency decisions and given a meaningful opportunity to influence environmental decisions. The PA DEP's failure to implement the requirements of its SIP is severely curtailing opportunities for public comment in air permitting decision. As noted, there is growing concern and public interest in the public health, welfare, and environmental quality impacts from the natural gas industry in Pennsylvania. Proper enforcement of public notice and comment procedures will ensure that citizens can participate in the decision-making process and ensure that their concerns are taken into consideration before the final permit is issued. The

[69] *See* 42 U.S.C. § 7509(a)(4).

ability to provide public comment of proposed permits promotes trust and acceptance of final agency actions.

Again, Petitioners request the Administrator exercise her authority under the CAA and undertake the following actions:

1. Pursuant to 42 U.S.C. §§ 7410(m) and 7509(a)(4) of the CAA, find that requirements of Pennsylvania's SIP are not being implemented by PA DEP with regards to the issuing of plan approvals under the Air Quality Program, both inside and outside of designated nonattainment areas, within the Commonwealth of Pennsylvania;

2. Apply the sanctions set forth at 42 U.S.C. § 7509(b) against the Commonwealth of Pennsylvania in accordance with requirements of 42 U.S.C. §§ 7410(m), 7509(a)(4) and 7661a(i). Petitioners request the Administrator exercise her discretion to apply sanctions, where allowed, and where application of sanctions are nondiscretionary, to apply them as expeditiously as possible. Petitioners further request the Administrator withhold CAA § 105 grant funding from Pennsylvania, as authorized by 42 U.S.C. § 7509(a)(4), unless and until Pennsylvania rectifies its finding of failure to implement its SIP.

As stated, this issue requires urgent action from the Administrator. Clean Air Council therefore requests EPA expedite resolution of this matter and respond within sixty days. Given, that Pennsylvania continues to apply streamlined permitting procedures which curtail opportunities for public comment for plan approvals and that are plainly inconsistent with its applicable SIP there is urgent need for the Administrator to intervene.

Thank you for your consideration of this Petition. If you have any questions, or would like to discuss this matter further, please do not hesitate to contact me at 215-567-4004, ext. 116.

Submitted this 28 day of November, 2011.

Joseph Otis Minott, Esq.

cc: Gina McCarthy, Assistant Administrator, EPA Office of Air and Radiation;
Shawn Garvin, Regional Administrator, EPA Region 3
Michael Krancer, Secretary, Pennsylvania Department of Environmental Protection

TABLE OF EXHIBITS

1. Pennsylvania Environmental Quality Board notice of amendment to Chapter 127; Air Quality Permit Streamlining, 38 Pa. B. 2365 (May 24, 2008).

2. Pennsylvania Air Quality Permit Streamlining Comment/Response Document, 37 Pa. B 1317 (March 24, 2007).

3. PA DEP Streamlined Public Notice of Laser Northeast Gathering Co. LLC Plan Approvals; Air Quality Plan Approval and Operating Permit Applications New Sources and Modifications, 41 Pa. B. 3870 (July 16, 2011) (Plan Approval Nos.: 58-399-016; 58-399-017; 58-399-018; 58-399-019).

4. Copy of email communications with Raymond Kempa, New Source Review Chief for the Northeast Region PA DEP discussing file review procedures.

5. File review documents obtained by CAC for Laser Northeast Gather Co. LLC Plan Approval Nos.: 58-399-016; 58-399-017; 58-399-018; 58-399-019.

6. Clean Air Council Comments Regarding Laser Northeast Gathering Co. LLC. Plan Approval Nos.: 58-399-016; 58-399-017; 58-399-018; 58-399-019 (August 15, 2011).

7. PA DEP Streamlined Public Notice of Laser Northeast Gathering Co. LLC Shields Compressor Station Plan Approval; Air Quality Plan Approval and Operating Permit Applications New Sources and Modifications, 41 Pa. B. 4777 (September 3, 2011) (Plan Approval No.: 58-399-023).

8. File review documents obtained by CAC for Laser Northeast Gathering Co. LLC Shields Compressor Station Plan Approval No. 58-399-023.

9. Clean Air Council Comments Regarding Laser Northeast Gathering Co. LLC. Plan Approval No. 58-399-023 (October 3, 2011).

EXHIBIT 1

RULES AND REGULATIONS

Title 25--ENVIRONMENTAL PROTECTION

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 127]

Air Quality Permit Streamlining

[38 Pa.B. 2365]
[Saturday, May 24, 2008]

The Environmental Quality Board (Board) amends Chapter 127 (relating to construction, modification, reactivation and operation of sources) to read as set forth in Annex A.

A. *Effective Date*

These final-form amendments will be effective upon final-form publication in the *Pennsylvania Bulletin.*

B. *Contact Persons*

For further information, contact Virendra Trivedi, Chief, New Source Review Section, Division of Permits, Bureau of Air Quality, 12th Floor, Rachel Carson State Office Building, P. O. Box 8468, Harrisburg, PA 17105-8468, (717) 772-3979; or Robert Reiley, Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060.

C. *Statutory Authority*

This final-form rulemaking is promulgated under the authority in section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P. S. § 4005(a)(1)), which grants to the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution, and section 6.1(b.3) of the APCA (35 P. S. § 4006.1(b.3)), which requires the Board by regulation to establish adequate, streamlined and reasonable procedures for expeditiously determining when applications are complete and for expeditious review of applications.

D. *Background and Summary*

As part of an effort to streamline the air quality permitting process, the Department of Environmental Protection (Department) investigated ways to reduce the plan approval

application time, reduce unnecessary costs to industry and continue to ensure that citizens receive adequate notice of potential plan approval/permitting actions to enable timely comment on issues of public concern. The Department wanted to employ faster response times for minor permitting actions for needed product improvements, which allows industry to be responsive to free market changes, while at the same time ensuring that those changes do not degrade existing air quality. In addition, the Department wanted to ensure that the permit streamlining effort benefited the Department, as well, by allowing it to focus scarce administrative resources on evaluating major source permit applications that have the potential to have more significant environmental impacts than minor sources. As part of this effort, the Board has approved final amendments to extend the authorization of a source to temporarily operate to facilitate shake-down, and to revise the public notice provisions which address receipt of applications for plan approval and intent to issue certain plan approvals. In addition, the Board has finalized provisions regarding completeness criteria for applications for plan approval. The Board believes that this final-form rulemaking will continue to protect air quality, allow business to respond to market changes and allow for adequate public participation.

The final-form rulemaking contains several amendments to the Department's air quality regulations. The Department consulted with the Air Quality Technical Advisory Committee (AQTAC) during the development of this final rulemaking. At its July 26, 2007, meeting, the AQTAC concurred with the Department's recommendation that the Board consider the final amendments on February 19, 2008. The Department also consulted with the Citizens Advisory Council during the development of the final-form rulemaking.

E. *Summary of the Final-Form Rulemaking*

The final-form rulemaking amends § 127.12b (relating to plan approval terms and conditions) to extend from 120 days to 180 days the duration for temporary "shake-down" operation of new air contamination sources and air cleaning devices subject to the plan approval requirements. This section was not modified between proposed and final-form rulemaking.

Section 127.12d (relating to completeness determination) sets forth the criteria the Department will use to determine if an application for plan approval is complete. This section was modified between proposed and final-form rulemaking to provide that the Department would make an administrative completeness determination within 30 days of receipt of the application. This section was also modified to require an applicant to provide supplemental information to the Department within 10-working days of receipt of a written request for supplemental information. The supplemental information must be provided within 10-working days of receipt of the Department's written request for additional information for the administrative completeness determination. The Department will return an application if an applicant fails to provide the requested information. Other minor clarifying changes were made as well.

Section 127.44 (relating to public notice) has been amended to, among other things, require the Department to publish in the *Pennsylvania Bulletin* a notice of receipt and intent to issue certain minor plan approvals. This section was modified between proposed and final-form rulemaking to provide that the Department will prepare a notice of receipt and intent to issue in accordance with § 127.45 (relating to contents of notice). The information elements to be included in the public notice were deleted from this section and moved to

§ 127.45. In addition other minor clarifying changes were made as well.

Section 127.45 was amended between proposed and final-form rulemaking to include the information elements in the public notice of receipt and intent to issue that were originally under § 127.44. In addition, other clarifying changes were made as well.

Section 127.48 (relating to conferences and hearings) is amended to require, in certain instances, that the Department publish notice of hearings or conferences in a newspaper of general circulation and the *Pennsylvania Bulletin*. This section was not modified between proposed and final-form rulemaking.

The final-form rulemaking will be submitted to the United States Environmental Protection Agency (EPA) as a revision to Pennsylvania's State Implementation Plan codified in 40 CFR 52.2020 (relating to identification of plan).

This notice is given under the Board's order at its meeting of February 19, 2008.

F. *Summary of Comments and Responses*

Twelve commentators submitted comments during the public comment period. In addition, the Independent Regulatory Review Commission (IRRC) and the Senate Environmental Resources and Energy Committee submitted comments during the extended comment periods authorized by the Regulatory Review Act (71 P. S. §§ 745.1--745.15). The following is a summary of the major comments that were received and responses.

Several commentators supported the Board's efforts to streamline the air quality permitting process. The Board agrees that the proposed changes will improve the overall permitting process by reducing both the plan approval application processing time and unnecessary costs to the applicants and the Department, while still providing timely notice to the public for comment on all complete plan approval applications submitted to the Department.

Several commentators supported the proposed change to § 127.12b that extends the temporary shakedown period for a facility for additional limited periods from 120 days to 180 days. The Board believes that extending the temporary shakedown period from 120 days to 180 days will allow companies adequate time to test newly permitted sources in accordance with the more complicated stack test requirements, rather than reapply for another extension for "shakedown" purposes.

Several commentators recommended that the Board adopt a deadline for issuance of the "completeness determination" under § 127.12d. The Board agrees and has revised § 127.12d(a) to provide that the Department will provide written notice of the completeness determination to the applicant "within 30 days of receipt of an application."

A commentator requested that the term "other documents" in § 127.12d(b) be expanded to be more specific. The Board agrees. Section 127.12d(b) of the final-form rulemaking has been revised to clarify that the minimum requirements for documentation to be submitted with a plan approval application include "other documents requested in the plan approval application."

Several commentators urged the Board to reject the proposed revisions because several aspects of the proposed rulemaking will severely curtail opportunities for effective citizen

participation in air permitting decisions. The primary objective of the APCA is the protection of public health, safety and well-being of the citizens of this Commonwealth. See 35 P. S. § 4002(a)(i). The commentators submited that this objective is furthered by continuing to provide citizens of this Commonwealth with information about all plan approvals, including all permit conditions, by publication in the *Pennsylvania Bulletin*. The commentators urged the Board to reject the Department's proposal in derogation of this fundamental objective of the APCA.

The Board disagrees with the commentators that pubiic participation in the plan approval application process will be severely curtailed by the proposed changes to the plan approval requirements. Rather, the proposed changes to § 127.44 clarify the Department's current practice in publishing notices of receipt for plan approval applications for sources for which there is little to no public interest or concern. As a result, all plan approval actions will have at least a 30-day public comment period. The amendatory provisions in the final-form regulation are consistent with section 6.1(b.3) of the APCA, which requires the Board to establish adequate, streamlined and reasonable procedures by regulation for expeditiously determining when applications are complete and for expeditious review of applications. See 35 P. S. § 4006.1(b.3). In addition, the changes to § 127.45 merely clarify the Department's general practice in publishing a brief description of the proposed action. Section 2 of the APCA provides, in part, that it is " . . . the policy of the Commonwealth of Pennsylvania to protect the air resources of this Commonwealth to the degree necessary for the (i) protection of public health, safety and well-being of the citizens of Pennsylvania . . ." See 35 P. S. § 4002(a)(i). The permit streamlining amendments set forth in the final-form rulemaking will not adversely impact the protection of public health and the environment nor curtail public involvement in the permitting process.

One commentator requested that the Board amend the regulations to allow for a reasonable time period for approval of trial burns of "opportunity fuels" of previously known characteristics. The Board disagrees. The Department is taking a number of steps to provide operational flexibilities for approval of trial burns of "opportunity fuels." Section 127.14 (relating to exemptions) provides an exemption from the permit requirements for approval of trial burns of "opportunity fuels." Exemptions can be determined from the existing list of sources or through the use of a request for determination.

A commentator noted that as amended, § 127.45(b)(5) would no longer require a "description of the reasons" for including conditions and was concerned with this change. The Board notes that while the requirements of existing of § 127.45(5) could be interpreted as requiring that the entire plan approval conditions need to be published in the notice of action to be taken, to do so presents significant costs to the Department as well as the applicant. Consequently, new § 127.45(b)(5) has been clarified to require a brief description of the conditions being placed in the plan approval with reference to applicable State and Federal requirements. The entire plan approval will be available for review at the location specified in the notice and will also be provided upon request.

G. *Benefits, Costs and Compliance*

Benefits

Overall, the citizens of this Commonwealth will benefit from this final-form rulemaking because the Department's air quality program staff will be afforded additional time for

evaluating major source permit applications that will likely have significant environmental impacts. In addition, the final-form rulemaking will allow industry to be responsive to free market changes while at the same time ensuring that those changes do not degrade existing air quality.

Compliance Costs

This final-form rulemaking will reduce compliance costs for industry by reducing the number of authorizations requested to extend the temporary operation period to facilitate the shakedown of sources and air cleaning devices. In addition, the cost of complying with the notice provisions will be reduced substantially because publication of the plan approval will no longer be required.

Compliance Assistance

The Department plans to educate and assist the public and regulated community with understanding the amendments to the plan approval requirements. This outreach effort will be accomplished through the Department's ongoing compliance assistance program.

Paperwork Requirements

The final-form rulemaking will not increase the paperwork that is already generated during the normal course of business.

H. *Pollution Prevention*

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101--13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This final-form rulemaking will allow industry to be responsive to free market changes, while at the same time ensuring that those changes do not degrade existing air quality.

I. *Sunset Review*

The final-form rulemaking will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the intended goals.

J. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on March 9, 2007, the Department submitted a copy of the notice of proposed rulemaking, published at 37 Pa.B. 1317, to IRRC and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees (Committees) for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were

provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulmaking, the Department has considered all comments from IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act, on April 16, 2008, this final-form rulemaking was deemed approved by the Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on April 17, 2008, and approved the final-form rulemaking.

K. *Findings*

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2.

(2) At least a 60-day public comment period was provided as required by law, and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposal published at 37 Pa.B. 1317 (March 24, 2007).

(4) This final-form rulemaking is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

L. *Order*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapter 127 are amended by amending §§ 127.12b, 127.44, 127.45 and 127.48; and by adding § 127.12d to read as set forth in Annex A.

(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Committees as required by the Regulatory Review Act.

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This final-form rulemaking will be submitted to the EPA as an amendment to the Pennsylvania State Implementation Plan.

(f) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin.*

KATHLEEN A. MCGINTY,
Chairperson

(*Editor's Note:* For the text of the order of the Independent Regulatory Review Commission relating to this document, see 38 Pa.B. 2132 (May 3, 2008).)

Fiscal Note: Fiscal Note 7-408 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 127. CONSTRUCTION, MODIFICATION, REACTIVATION AND OPERATION OF SOURCES

Subchapter B. PLAN APPROVAL REQUIREMENTS

§ 127.12b. Plan approval terms and conditions.

(a) A plan approval may contain terms and conditions the Department deems necessary to assure the proper operation of the source including the requirement for a compliance demonstration prior to issuance of an operating permit.

(b) At a minimum, each plan approval must incorporate by reference the emission and performance standards and other requirements of the act, the Clean Air Act or the regulations adopted under the act or the Clean Air Act.

(c) The plan approval must incorporate the monitoring, recordkeeping and reporting provisions required by Chapter 139 (relating to sampling and testing) and other monitoring, recordkeeping or reporting requirements of this article and additional requirements related to monitoring, recordkeeping and reporting required by the Clean Air Act and the regulations thereunder, including, if applicable, the enhanced monitoring requirements of 40 CFR Part 64 (relating to enhanced monitoring).

(d) The plan approval must authorize temporary operation to facilitate shakedown of sources and air cleaning devices, to permit operations pending issuance of a permit under Subchapter F (relating to operating permit requirements) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contamination aspects of the source. This temporary operation period will be valid for a limited time, not to exceed 180 days, but may be extended for additional limited periods, each not to exceed 180 days.

(e) Temporary operation will not be authorized or extended under this section which may circumvent the requirements of this chapter.

§ 127.12d. Completeness determination.

(a) The Department will determine if an application for plan approval is administratively complete and will provide written notice of the completeness determination to the applicant within 30 days of receipt of an application.

(b) For purposes of this section, an application is administratively complete if it contains the necessary information, maps, fees and other documents requested in the plan approval application, regardless of whether the information, maps and documents would be sufficient to justify issuance of the plan approval.

(c) If the Department determines that the application is not administratively complete, the Department will send the applicant a written statement of the specific information, maps, fees and documents that are required to make the application administratively complete. If the applicant does not provide the requested information to the Department within 10 working days of receipt of the request, the Department will return the application and fees to the applicant.

§ 127.44. Public notice.

(a) The Department will publish in the *Pennsylvania Bulletin* a notice of receipt and intent to issue for each plan approval application, except plan approval applications subject to the notice requirements of subsection (b). The Department will prepare a notice of receipt and intent to issue in accordance with § 127.45(a) (relating to contents of notice).

(b) The Department will prepare a notice, in accordance with § 127.45(b), of action to be taken on applications for plan approvals for the following:

(1) Sources subject to Subchapter D (relating to prevention of significant deterioration of air quality).

(2) Sources subject to Subchapter E (relating to new source review).

(3) Sources of VOCs that submit plan approval applications demonstrating compliance with Chapter 129 (relating to standards for sources) using § 129.51(a) (relating to general).

(4) Sources located within a Title V facility.

(5) Other sources for which the Department has determined there is substantial public interest or for which the Department invites public comment.

(c) The notice required by subsection (b)(1)--(4) will be completed and sent by the Department to the applicant, the EPA, any state within 50 miles of the facility and any state whose air quality may be affected and that is contiguous to this Commonwealth. The applicant shall, within 10 days of receipt of notice, publish the notice on at least 3 separate days in a prominent place and size in a newspaper of general circulation in the county in which the source is to be located; proof of the publication shall be filed with the Department within 1 week thereafter. A plan approval will not be issued by the Department in the event of failure by the applicant to submit the proof of publication.

(d) If the Department denies a plan approval, the requirements of subsection (c) do not apply. Written notice of a denial will be given to requestors and to the applicant in accordance with § 127.13c (relating to notice of basis for certain plan approval decisions).

(e) In each case, the Department will publish notices required in this section in the *Pennsylvania Bulletin*.

(f) The notice will state, at a minimum, the following:

(1) The location at which the application may be reviewed. This location must be in the region affected by the application.

(2) A 30-day comment period, from the date of publication, will exist for the submission of comments.

(3) Plan approvals issued to sources identified in subsection (b)(1)--(4) or plan approvals issued to sources with limitations on the potential to emit may become part of the SIP and will be submitted to the EPA for review and approval.

§ 127.45. Contents of notice.

(a) The notice of receipt and intent to issue for each plan approval required by § 127.44(a) (relating to public notice) must include the following:

(1) The name and address of the applicant.

(2) The location and name of the source or facilty at which the construction, modification, reactivation or installation is proposed.

(3) A brief description of the proposed action, including a brief description of the:

(i) Air contamination source to be constructed, modified, reactivated or installed.

(ii) Air cleaning device or control technology required including best available technology.

(iii) Type of conditions being placed in the plan approval with reference to applicable State and Federal requirements.

(4) The type and quantity of air contaminants being emitted.

(5) The name and telephone number of a person to contact at the Department for additional information.

(6) A statement that a person may oppose the proposed plan approval by filing a written protest with the Department, at the appropriate regional office described in § 121.4 (relating to regional organization of the Department).

(b) The notice of proposed plan approval issuance required by § 127.44(b) must include the following:

(1) The name and address of applicant.

(2) The location and name of the source or facility at which construction, modification, reactivation or installation is proposed.

(3) The type and quantity of air contaminants being emitted.

(4) For sources subject to Subchapter D (relating to prevention of significant deterioration of air quality), the degree of increment consumption expected to result from the operation of the source or facility.

(5) A brief description of the conditions being placed in the plan approval with reference to applicable State and Federal requirements.

(6) A description of the procedures for reaching a final decision on the proposed plan approval action including:

(i) The ending date for the receipt of written comments or written protests.

(ii) Procedures for requesting a hearing and the nature of that hearing.

(iii) Other procedures by which the public may participate in the final decision.

(7) The name and telephone number of a person to contact at the Department for additional information.

(8) A statement that a person may oppose the proposed plan approval by filing a written protest with the Department, at the appropriate regional office described in § 121.4 (relating to regional organization of the Department).

§ 127.48. Conferences and hearings.

(a) Prior to any plan approval issuance, the Department may, in its discretion, hold a fact finding conference or hearing at which the petitioner, and any person who has properly filed a protest under § 127.46 (relating to filing protests) may appear and give testimony; provided, however, that in no event will the Department be required to hold such a conference or hearing.

(b) The applicant, the protestant, commentators and other participants will be notified of the date, time, place and purpose of a conference or hearing, in writing or by publication in a newspaper of general circulation in the county in which the source is to be located and the *Pennsylvania Bulletin*, except when the Department determines that notification by telephone will be sufficient.

[Pa.B. Doc. No. 08-972. Filed for public inspection May 23, 2008, 9:00 a.m.]

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EXHIBIT 2

PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 127]

Permit Streamlining

[37 Pa.B. 1317]
[Saturday, March 24, 2007]

The Environmental Quality Board (Board) proposes to amend Chapter 127 (relating to construction, modification, reactivation and operation of sources) to read as set forth in Annex A.

This notice is given under the Board's order at its meeting of January 17, 2007.

A. *Effective Date*

These amendments will be effective upon final-form publication in the *Pennsylvania Bulletin*.

B. *Contact Persons*

For further information, contact John Slade, Chief, Division of Permits, Bureau of Air Quality, 12th Floor, Rachel Carson State Office Building, P. O. Box 8468, Harrisburg, PA 17105-8468, (717) 783-9476; or Robert "Bo" Reiley, Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060.

Information regarding submitting comments on this proposed rulemaking appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available on the Department of Environmental Protection's (Department) website: www.depweb.state.pa.us.

C. *Statutory Authority*

This rulemaking is proposed under the authority in section 5(a)(1) of the Air Pollution Control Act (APCA) (35 P. S. § 4005(a)(1)), which grants to the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution and section 6.1(b.3) of the APCA (35 P. S. § 4006.1(b.3)), which requires the Board by

regulation to establish adequate, streamlined and reasonable procedures for expeditiously determining when applications are complete and for expeditious review of applications.

D. *Background and Summary*

As part of an effort to streamline the air quality permitting process, the Department investigated ways to reduce the plan approval application time, reduce unnecessary costs to industry and continue to ensure that citizens receive adequate notice of potential plan approval/permitting actions to enable timely comment on issues of public concern. The Department wants to employ faster response times for minor permitting actions for needed product improvements, which allows industry to be responsive to free market changes, while at the same time ensuring that those changes do not degrade existing air quality. In addition, the Department wanted to ensure that the permit streamlining effort benefited the Department, as well, by allowing it to focus scarce administrative resources on evaluating major source permit applications that will likely have significant environmental impacts. As part of this effort, the Department proposes amendments to extend the authorization of a source to temporarily operate to facilitate shake-down and to revise the public notice provisions which address receipt of applications for plan approval and intent to issue certain plan approvals. In addition, the Department is proposing provisions regarding completeness criteria for applications for plan approval. The Department believes that these proposed amendments will continue to protect air quality, allow business to respond to market changes and allow for adequate public participation.

The Department worked with the Air Quality Technical Advisory Committee (AQTAC) in the development of this proposed rulemaking. At its March 13, 2006, meeting, the AQTAC recommended that the Board consider the proposed amendments in the near future.

E. *Summary of Regulatory Revisions*

Section 127.12b (relating to plan approval terms and conditions) is proposed to be amended to extend from 120 to 180 days the duration for temporary "shake-down" operation of new equipment subject to the plan approval requirements.

New § 127.12d (relating to completeness determination) sets forth the criteria the Department will use to determine if an application for plan approval is complete.

Section 127.44 (relating to public notice) is proposed to be amended to, among other things, require the Department to publish in the *Pennsylvania Bulletin* a notice of receipt and intent to issue certain minor plan approvals.

Section 127.45 (relating to contents of notice) is proposed to be amended to make certain corrections to the text related to clarity.

Section 127.48 (relating to conferences and hearings) is proposed to be amended to require, in certain instances, that the Department publish notice of hearings or conferences in a newspaper of general circulation and the *Pennsylvania Bulletin.*

F. *Benefits, Costs and Compliance*

Benefits

Overall, the citizens of this Commonwealth will benefit from this proposed rulemaking because the Department will be able to focus scarce administrative resources on evaluating major source permit applications that will likely have significant environmental impacts. In addition, the proposed amendments will allow industry to be responsive to free market changes while at the same time ensuring that those changes do not degrade existing air quality.

Compliance Costs

This proposed rulemaking will reduce the operating costs of industry through enhanced operational flexibility.

Compliance Assistance

The Department plans to educate and assist the public and regulated community with understanding newly revised requirements and how to comply with them. This will be accomplished through the Department's ongoing Regional Compliance Assistance Program.

Paperwork Requirements

The proposed amendments will not increase the paperwork that is already generated during the normal course of business.

G. *Pollution Prevention*

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101--13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This proposed rulemaking will allow industry to be responsive to free market changes, while at the same time ensuring that those changes do not degrade existing air quality.

H. *Sunset Review*

The regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on March 9, 2007, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments,

recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor of comments, recommendations or objections raised.

J. *Public Comments*

Written comments. Interested persons are invited to submit comments, suggestions or objections regarding the proposed rulemaking to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be postmarked by May 25, 2007. Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be postmarked May 25, 2007. The one-page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final-form rulemaking will be considered.

Electronic comments. Comments may be submitted electronically to the Board at RegComments@state.pa.us and must also be received by the Board by May 25, 2007. A subject heading of the proposal and a return name and address must be included in each transmission.

K. *Public Hearings*

The Board will hold three public hearings for the purpose of accepting comments on this proposal. The hearings will be held as follows:

April 24, 2007 1 p.m.	Department of Environmental Protection Southwest Regional Office Waterfront A and B Conference Room 400 Waterfront Drive Pittsburgh, PA 15222
April 24, 2007 1 p.m.	Department of Environmental Protection Southeast Regional Office Delaware Room 2 East Main Street Norristown, PA 19401
April 24, 2007 1 p.m.	Department of Environmental Protection Rachel Carson State Office Building Room 105 400 Market Street Harrisburg, PA 17105

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526 at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three

written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans With Disabilities Act of 1990 should contact the Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) to discuss how the Department may accommodate their needs.

KATHLEEN A. MCGINTY,
Chairperson

Fiscal Note: 7-408. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 127. CONSTRUCTION, MODIFICATION, REACTIVATION AND OPERATION OF SOURCES

Subchapter B. PLAN APPROVAL REQUIREMENTS

§ 127.12b. Plan approval terms and conditions.

* * * * *

(d) The plan approval shall authorize temporary operation to facilitate shakedown of sources and air cleaning devices, to permit operations pending issuance of a permit under Subchapter F (relating to operating permit requirements) or Subchapter G (relating to Title V operating permits) or to permit the evaluation of the air contamination aspects of the source. This temporary operation period will be valid for a limited time, not to exceed 180 days, but may be extended for additional limited periods, each not to exceed **[120] 180** days.

* * * * *

§ 127.12d. Completeness determination.

(a) **The Department will determine if an application for plan approval is administratively complete and will provide written notice of the completeness determination to the applicant.**

(b) For purposes of this section, an application is administratively complete if it contains the necessary information, maps, fees and other documents, regardless of whether the information, maps and documents would be sufficient to justify issuance of the plan approval.

(c) If the Department determines that the application is not administratively complete, the Department will return the application and fees to the applicant, along with a written statement of the specific information, maps, fees and documents that are required to make the application administratively complete.

§ 127.44. Public notice.

(a) **The Department will publish in the *Pennsylvania Bulletin* a notice of receipt and intent to issue for each plan approval application, except plan approval applications subject to the notice requirements of subsection (b). The notice of receipt and intent to issue must include the following:**

(1) The name and address of the applicant.

(2) The location and name of the plant or facility at which the construction, modification, reactivation or installation is proposed.

(3) A brief description of the proposed action, including a general description of the equipment to be installed or modified along with the anticipated pollutant emission increases or decreases.

(4) The name and telephone number of a person to contact for additional information.

(5) The location of the regional office where the application will be reviewed.

(b) The Department will prepare a notice of action to be taken on applications for plan approvals for the following:

* * * * *

(5) **[Other sources required to obtain plan approval.**

(6)] Other sources**, including synthetic minor permit applications,** for which the Department has determined there is substantial public interest or for which the Department invites public comment.

[(b)] (c) The notice required by subsection **[(a)] (b)**(1)--(4) will be completed and sent to the applicant, the EPA, any state within 50 miles of the facility and any state whose air quality may be affected and that is contiguous to this Commonwealth. The applicant shall, within 10 days of receipt of notice, publish the notice on at least 3 separate days in a prominent place and size in a newspaper of general circulation in the county in which the source is to be located; proof of the publication shall be filed with the Department within 1 week thereafter. A plan approval will not be issued by the Department in the event of failure by the applicant to submit the proof of publication.

[(c)] (d) If the Department denies a plan approval, the requirements of subsection **[(b)] (c)** do not apply. Written notice of a denial will be given to requestors and to the applicant **in accordance with § 127.13c (relating to notice of basis for certain plan approval decisions)**.

[(d)] (e) In each case, the Department will publish notices required in **[subsection (a)] this section** in the *Pennsylvania Bulletin*.

[(e)] (f) The notice will state, at a minimum, the following:

* * * * *

(3) Plan approvals issued to sources identified in subsection **[(a)] (b)**(1)--(4) or plan approvals issued to sources with limitations on the potential to emit may become part of the SIP and will be submitted to the EPA for review and approval.

§ 127.45. Contents of notice.

The **[notice] notices** of proposed plan approval issuance required by § 127.44**[(a)](b)** (relating to public notice) **[shall] must** include the following:

* * * * *

(2) The location and name of the plant or facility at which construction **[or],** modification **or installation** is **[taking place] proposed.**

* * * * *

(5) **[The] A brief description of the** conditions being placed in the plan approval **[and a brief description of the reasons for including these conditions]** with reference to applicable State and Federal requirements.

(6) A description of the procedures for reaching a final decision on the proposed plan approval action including:

(i) The ending date for the receipt of **written comments or** written protests.

* * * * *

§ 127.48. Conferences and hearings.

* * * * *

(b) The applicant, the protestant, **commentators** and other participants will be notified of the **date,** time, place and purpose of a conference or hearing, in writing or by publication in a newspaper **[or] of general circulation in the county in which the source is to be located and** the *Pennsylvania Bulletin*, except **[where] when** the Department determines that notification by telephone will be sufficient.

[Pa.B. Doc. No. 07-492. Filed for public inspection March 23, 2007, 9:00 a.m.]

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webmaster@PaBulletin.com

EXHIBIT 3

[41 Pa.B. 3870]
[Saturday, July 16, 2011]

[Continued from previous Web Page]

AIR QUALITY

PLAN APPROVAL AND OPERATING PERMIT APPLICATIONS NEW SOURCES AND MODIFICATIONS

The Department has developed an "integrated" plan approval, State Operating Permit and Title V Operating Permit program. This integrated approach is designed to make the permitting process more efficient for the Department, the regulated community and the public. This approach allows the owner or operator of a facility to complete and submit permitting documents relevant to its application one time, affords an opportunity for public input and provides for sequential issuance of the necessary permits.

The Department received applications for Plan Approvals or Operating Permits from the following facilities.

Copies of these applications, subsequently prepared draft permits, review summaries and other support materials are available for review in the regional office listed before the applications. Persons interested in reviewing the application files should contact the appropriate regional office to schedule appointments.

Persons wishing to receive a copy of a proposed Plan Approval or Operating Permit shall indicate interests to the Department regional office within 30 days of the date of this notice and shall file protests or comments on a proposed Plan Approval or Operating Permit within 30 days of the Department providing a copy of the proposed documents to persons or within 30 days of its publication in the *Pennsylvania Bulletin*, whichever comes first. Interested persons may also request that hearings be held concerning a proposed Plan Approval or Operating Permit. A comment or protest filed with the Department regional office shall include a concise statement of the objections to the issuance of the Plan Approval or Operating Permit and relevant facts which serve as the basis for the objections. If the Department schedules a hearing, a notice will be published in the *Pennsylvania Bulletin* at least 30 days prior the date of the hearing.

Persons with a disability who wish to comment and require an auxiliary aid, service or other accommodation to participate should contact the regional office listed before the application. TDD users may contact the Department through the Pennsylvania AT&T Relay Service at (800) 654-5984.

Final Plan Approvals and Operating Permits will contain terms and conditions to ensure that the source is constructed and operating in compliance with applicable requirements in 25 Pa. Code Chapters 121—143, the Federal Clean Air Act (42 U.S.C.A. §§ 7401—7671q) and regulations adopted under the Federal Clean Air Act.

PLAN APPROVALS

Receipt of Plan Approval Applications and Intent to Issue Plan Approvals, and Intent to Issue Amended Operating Permits under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter B And Subchapter F. These actions may include the administrative amendments of an associated operating permit.

Northeast Region: Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18711-0790

Contact: Ray Kempa, New Source Review Chief—Telephone: 570-826-2507

58-399-016: Laser Northeast Gathering Co. LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for construction of a natural gas compressor station at their Snake Creek FRP Site in Liberty Township, **Susque- hanna County**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a), the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be located in Liberty Twp., Susquehanna County. This Plan Approval No. 58-399-016 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-016 is for the construction of a natural gas compressor station at the Snake Creek FRP Site. The station will consist of two CAT G3606LE engines and two dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code 127.12 (a) (5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20% at any time. The company shall be subject to and comply with 25 Pa. Code 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following: Name, address and telephone number of the person submitting the comments. Identification of the proposed permit No.: 58-399-016.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the *Pennsylvania Bulletin* or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone # 570-826-2511 within 30 days after publication date.

58-399-017 Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for construction of a natural gas compressor station at their Lane Road FRP Site in Middletown Township, **Susquehanna County**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a) the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be located in Middletown Twp., Susquehanna County. This Plan Approval No. 58-399-017 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-017 is for the construction of a natural gas compressor station at the Lane Road FRP Site. The station will consist of two CAT G3606LE engines and two dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and

Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code 127.12 (a) (5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20 % at any time. The company shall be subject to and comply with 25 PA Code 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following: Name, address and telephone number of the person submitting the comments. Identification of the proposed permit No.: 58-399-017.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the *Pennsylvania Bulletin* or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone # 570-826-2511 within 30 days after publication date.

58-399-018: Laser Northeast Gathering Co., LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for construction of a natural gas compressor station at their Kane Road FRP Site in Forest Lake Township, **Susque- hanna County**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a) the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be located in Forest Lake Twp., Susquehanna County. This Plan Approval No. 58-399-018 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-018 is for the construction of a natural gas compressor station at the Kane Road FRP Site. The station will consist of two CAT G3606LE engines and two dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code 127.12 (a) (5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20 % at any time. The company shall be subject to and comply with 25 Pa. Code 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following:

Name, address and telephone number of the person submitting the comments.

Identification of the proposed permit No.: 58-399-018.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the *Pennsylvania Bulletin* or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone # 570-826-2511 within 30 days after publication date.

58-399-019 Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for construction of a natural gas compressor station at the Lawrence NE FRP Site Liberty Township, **Susque- hanna County**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a) the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be located in Liberty Twp., Susquehanna County. This Plan Approval No. 58-399-019 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-019 is for the construction of a natural gas compressor station at the Lawrence NE FRP Site. The station will consist of two CAT G3606LE engines and two dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code 127.12 (a) (5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20% at any time. The company shall be subject to and comply with 25 Pa. Code 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following:

Name, address and telephone number of the person submitting the comments.

Identification of the proposed permit No.: 58-399-019.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the *Pennsylvania Bulletin* or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone # 570-826-2511 within 30 days after publication date.

[Continued on next Web Page]

EXHIBIT 4

Matt Stern

From: Jay Duffy
Sent: Monday, November 28, 2011 10:49 AM
To: Matt Stern
Subject: FW: File Review

From: Kempa, Raymond [mailto:rkempa@state.pa.us]
Sent: Wednesday, July 27, 2011 9:32 AM
To: Jay Duffy
Subject: RE: File Review

Your opportunity to comment is right now, before 8/15/11, which follows in the policy of publicizing minor permit applications.

From: Jay Duffy [mailto:jduffy@cleanair.org]
Sent: Tuesday, July 26, 2011 3:17 PM
To: Kempa, Raymond
Cc: Elko, Neal
Subject: RE: File Review

So there will not be an opportunity for public review and comment on a Proposed Plan Approval and the Review Memo? Is this the case with all minor source permits in the Northeast Regional PADEP office? Thank you for the information.

From: Kempa, Raymond [mailto:rkempa@state.pa.us]
Sent: Tuesday, July 26, 2011 11:01 AM
To: Jay Duffy
Cc: Elko, Neal
Subject: RE: File Review

Since this application is a for minor permit, it was published on 7/16/2011 in the Pa Bulletin as a combination Notice of Receipt and Intent to Issue as depicted under Title 25 – Chapter 127.44 for public notices. Therefore, no future Intent to Issue notice will occur. The application is presently under review and the review memo will be completed concurrently with the preparation of the final permit. At this time, you may request a file review of the contents of the application. Be advised that the formal comment period will be ending on 8/15/2011.

From: Jay Duffy [mailto:jduffy@cleanair.org]
Sent: Wednesday, July 20, 2011 2:56 PM
To: Kempa, Raymond
Subject: RE: File Review

Mr. Kempa,

I just went through Efacts and it appears that the Plan Approvals were just submitted on June 24th. We wouldn't want to review until a review memo was prepared for each and a proposed permit was together. Perhaps this review is premature and we should wait until you give your notice of intent to issue the plan approvals, thereby avoiding any of the scheduling issues. Please advise.

Thank you

From: Jay Duffy
Sent: Wednesday, July 20, 2011 1:31 PM
To: 'rkempa@state.pa.us'
Cc: Joe Minott
Subject: File Review

Mr. Kempa,

On Friday, July 15th the Clean Air Council faxed a "Request to Review Files" to your office. We would like to review four Plan Approvals noticed in the July 16th Pa Bulletin: 58-399-016, 58-399-017, 58-399-018 and 58-399-019. Comments on these Plan Approvals are due on August 15th. The first date made available to us was August 24th, but August 3rd & 4th were made available after I informed Records Management that August 24th would be too late to comment. I have tentatively accepted August 4th at 11:00 a.m., however when I informed Records Management that August 3rd & 4th happens to be the dates that the Clean Air Council has a staff-wide conference, I was informed that those were the only two days available. I understand that your office is very busy but making two days out of thirty available is not sufficient for meaningful public comment. The Clean Air Council has its own scanner and copier and therefore will only need access to the files. We are available to review the files any days other than August 3rd & 4th provided that there is sufficient time for review of the documents obtained to provide meaningful comments. We are also amenable to an extension of the comment period if that is easier for the PA DEP.

Thank you,

Jay Duffy, Esq.
Clean Air Council
Staff Attorney
135 South 19th Street, Suite 300
Philadelphia, PA 19103
215-567-4004 ext. 109

EXHIBIT 5

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST REGIONAL OFFICE

July 5, 2011

Mr. Dale R. Harper
Vice President Engineering
Laser Northeast Gathering Company, LLC
333 Clay Street, Suite 4500
Houston, TX 77002-4102

Re: Acceptance/Administrative Completeness Letter
Laser Northeast Gathering Co., LLC
Plan Approval Application No. 58-399-019
Lawrence NE Compressor Station
Liberty Township, Susquehanna County

Dear Mr. Harper:

On June 24, 2011, the Department of Environmental Protection (DEP) received the above referenced application. We have determined that the application contains the necessary documents and is administratively complete.

The administrative completeness review is the first in a series of reviews conducted by DEP. To help you better understand the application review process, a brief explanation of the permit application review process and approximate times are outlined on the enclosed Permit Application Review Process Fact Sheet.

Your permit application is eligible for DEP's Money-Back Guarantee Program. The program establishes that your Air Quality Permit application must be acted on within 180 days or the application fee will be returned. The program is explained in more detail on the enclosed Fact Sheet.

I hope you find this information helpful in understanding the application review process. If you have additional questions about your application, please contact Neal Elko at 570-826-2524 and refer to Plan Approval Application No. 58-399-019.

Sincerely,

Raymond Kempa Jr.

Raymond Kempa, Jr., P.E.
Environmental Engineer Manager
Air Quality Program

Enclosures - Permit Process Information

cc: Liberty Township Secretary
Susquehanna County Chief Clerk

interoffice memo - NSR Section

Date: 6/27/2011

To: [redacted] / Neal Elko / [redacted]

From: Raymond Kempa

Through: Neal Elko

RE: New Plan Approval Application

Accepted Complete date : 6/24/2011

eFacts Coding input : M15P5

- Application fee
- General Info. Form
- Compliance Review Form
- Copy of Co./Muni. notification
- Proof of Co./Muni. notification
- Appropriate application
- Addendum A – Source Applicable Requirements (Title V only)

Guzek Associates, Inc.

Mechanical, Electrical, Structural, Environmental, and Architectural Engineering

Phone: (570) 586-9700
Fax: (570) 586-6728
Email: guzekassoc@aol.com

401 DAVIS STREET
CLARKS SUMMIT, PA 18411-1837

June 22, 2011

PA Department of Environmental Protection
Bureau of Air Quality
2 Public Square
Wilkes-Barre, PA 18711-0790

Attention: Mr. Ray Kempa, P.E.
NSR Chief

Reference: Laser Northeast Gathering Company, LLC
Plan Approval Application: Lawrence Northeast FRP Site

Dear Mr. Kempa:

In behalf of my above-referenced client, I wish to submit in triplicate the enclosed Plan Approval application, which seeks permission to construct, own, and operate a natural gas compressor station at the Lawrence Northeast field receipt point (FRP) site in Liberty Township.

The emissions from this facility do not have the potential to exceed major source thresholds. We voluntarily request the following operating permit limits for this facility:

<50 TPY of VOC based on a 12-month rolling sum
<100 TPY of NO_x, CO, PM, or SO_x based on a 12 month rolling sum
<10 TPY of any single HAP, and <25 TPY of all aggregated HAP's based on a 12-month rolling sum

This facility is subject to area MACT standards under 40 CFR Part 63 Subparts ZZZZ and HH; NSPS standards under 40 CFR 60 Subpart JJJJ; and, 25 PA Code 127.12 (a)(5) Best Available Technology (BAT) requirements. Emissions from the engines will meet federal and state requirements.

Should you have any questions on this Application, please do not hesitate to call Mr. Dale Harper of Laser Northeast at 713/308-8116, or this writer.

Very truly yours,

Joseph J. Guzek, P.E.

Enclosure: Plan Approval Application (3 copies)

E-cc: Jack F. Walsh - Laser Northeast Gathering
Dale Harper - Laser Northeast Gathering

CERTIFIED RETURN RECEIPT MAIL 7009 3410 0000 8639 3496

Laser NE Gathering\11_652\Plan Approval-DEP Cvr Ltr

8000-PM-IT0001 Rev. 10/2009
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

GENERAL INFORMATION FORM – AUTHORIZATION APPLICATION

Before completing this General Information Form (GIF), read the step-by-step instructions provided in this application package. This version of the General Information Form (GIF) must be completed and returned with any program-specific application being submitted to the Department.

Related ID#s (If Known)			
Client ID#		APS ID#	
Site ID#		Auth ID#	
Facility ID#			

DEP USE ONLY
Date Received & General Notes

CLIENT INFORMATION

DEP Client ID#	Client Type / Code

Organization Name or Registered Fictitious Name	Employer ID# (EIN)	Dun & Bradstreet ID#
Laser Northeast Gathering Company, LLC	27-1124915	832-552645

Individual Last Name	First Name	MI	Suffix	SSN

Additional Individual Last Name	First Name	MI	Suffix	SSN

Mailing Address Line 1	Mailing Address Line 2
333 Clay Street, STE 4500	

Address Last Line – City	State	ZIP+4	Country
Houston	TX	77002-4102	USA

Client Contact Last Name	First Name	MI	Suffix
Harper	Dale	R	

Client Contact Title	Phone	Ext
Vice-President Engineering	(713) 308-8116	

Email Address	FAX
dharper@lasermidstream.com	(713) 920-9471

SITE INFORMATION

DEP Site ID#	Site Name
	Lawrence NE RFP

EPA ID#	Estimated Number of Employees to be Present at Site	1

Description of Site
Natural Gas Compressor Station

County Name	Municipality	City	Boro	Twp	State
Susquehanna	~~Forest Lake~~ LIBERTY TWP. P.E.	☐	☐	☒	PA
County Name	Municipality	City	Boro	Twp	State
		☐	☐	☐	

Site Location Line 1	Site Location Line 2

Site Location Last Line – City	State	ZIP+4
Montrose	PA	18801

Detailed Written Directions to Site
From the intersection of Mount Valley Rd. and T804. go ~ 2,000' NW

Site Contact Last Name	First Name	MI	Suffix
Stevens	William	C	

Site Contact Title	Site Contact Firm
VP Field Operations	Laser Northeast Gathering Company, LLC

Mailing Address Line 1	Mailing Address Line 2
1212 S. Abington Road	

Mailing Address Last Line – City	State	ZIP+4
Clarks Summit	PA	18411

Phone	Ext	FAX	Email Address
(570) 319-1800		(570) 319-1820	cstevens@lasermidstream.com

NAICS Codes (Two- & Three-Digit Codes – List All That Apply): 237

6-Digit Code (Optional): 237120

Client to Site Relationship: OWNOP

FACILITY INFORMATION

Modification of Existing Facility

		Yes	No
1.	**Will this project modify an existing facility, system, or activity?**	☐	☒
2.	**Will this project involve an addition to an existing facility, system, or activity?**	☐	☒

If "Yes", check all relevant facility types and provide DEP facility identification numbers below.

	Facility Type	DEP Fac ID#		Facility Type	DEP Fac ID#
☐	Air Emission Plant		☐	Industrial Minerals Mining Operation	
☐	Beneficial Use (water)		☐	Laboratory Location	
☐	Blasting Operation		☐	Land Recycling Cleanup Location	
☐	Captive Hazardous Waste Operation		☐	MineDrainageTrmt/LandRecyProjLocation	
☐	Coal Ash Beneficial Use Operation		☐	Municipal Waste Operation	
☐	Coal Mining Operation		☐	Oil & Gas Encroachment Location	
☐	Coal Pillar Location		☒	Oil & Gas Location	854664
☐	Commercial Hazardous Waste Operation		☐	Oil & Gas Water Poll Control Facility	
☐	Dam Location		☐	Public Water Supply System	
☐	Deep Mine Safety Operation -Anthracite		☐	Radiation Facility	
☐	Deep Mine Safety Operation -Bituminous		☐	Residual Waste Operation	
☐	Deep Mine Safety Operation -Ind Minerals		☐	Storage Tank Location	
☐	Encroachment Location (water, wetland)		☐	Water Pollution Control Facility	
☐	Erosion & Sediment Control Facility		☐	Water Resource	
☐	Explosive Storage Location		☐	Other:	

Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
	41	53	47	75	57	30

Horizontal Accuracy Measure: Feet --or-- Meters

Horizontal Reference Datum Code

- ☐ North American Datum of 1927
- ☒ North American Datum of 1983
- ☐ World Geodetic System of 1984

Horizontal Collection Method Code

Reference Point Code

Altitude: Feet --or-- Meters

Altitude Datum Name

- ☐ The National Geodetic Vertical Datum of 1929
- ☐ The North American Vertical Datum of 1988 (NAVD88)

Altitude (Vertical) Location Datum Collection Method Code

Geometric Type Code

Data Collection Date

Source Map Scale Number: Inch(es) = Feet

--or-- Centimeter(s) = Meters

PROJECT INFORMATION

Project Name
Lawrence NE RFP

Project Description
See the Attachment Tab "Project Description"

Project Consultant Last Name	First Name	MI	Suffix
N/A	N/A		

Project Consultant Title	Consulting Firm
N/A	N/A

Mailing Address Line 1	Mailing Address Line 2
N/A	

Address Last Line – City	State	ZIP+4
N/A		

Phone	Ext	FAX	Email Address
N/A			

Time Schedules	Project Milestone (Optional)
10-1-11 Proposed Construction Start Date	

1. **Have you informed the surrounding community and addressed any concerns prior to submitting the application to the Department?** ☒ Yes ☒ No Not yet received feedback
2. **Is your project funded by state or federal grants?** ☐ Yes ☒ No
   Note: If "Yes", specify what aspect of the project is related to the grant and provide the grant source, contact person and grant expiration date.
   Aspect of Project Related to Grant
   Grant Source: _____
   Grant Contact Person: _____
   Grant Expiration Date: _____
3. **Is this application for an authorization on Appendix A of the Land Use Policy? (For referenced list, see Appendix A of the Land Use Policy attached to GIF instructions)** ☒ Yes ☐ No
   Note: If "No" to Question 3, the application is not subject to the Land Use Policy.
   If "Yes" to Question 3, the application is subject to this policy and the Applicant should answer the additional questions in the **Land Use Information** section.

LAND USE INFORMATION

Note: Applicants are encouraged to submit copies of local land use approvals or other evidence of compliance with local comprehensive plans and zoning ordinances.

1. **Is there an adopted county or multi-county comprehensive plan?** ☒ Yes ☐ No
2. **Is there an adopted municipal or multi-municipal comprehensive plan?** ☒ Yes ☐ No
3. **Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance?** ☐ Yes ☒ No
   Note: If the Applicant answers "No" to either Questions 1, 2 or 3, the provisions of the PA MPC are not applicable and the Applicant does not need to respond to questions 4 and 5 below.
   If the Applicant answers "Yes" to questions 1, 2 and 3, the Applicant should respond to questions 4 and 5 below.
4. **Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval?** If zoning approval has been received, attach documentation. ☐ Yes ☐ No
5. **Have you attached Municipal and County Land Use Letters for the project?** ☒ Yes ☐ No

COORDINATION INFORMATION

Note: The PA Historical and Museum Commission must be notified of proposed projects in accordance with DEP Technical Guidance Document 012-0700-001 and the accompanying Cultural Resource Notice Form.

If the activity will be a mining project (i.e., mining of coal or industrial minerals, coal refuse disposal and/or the operation of a coal or industrial minerals preparation/processing facility), respond to questions 1.0 through 2.5 below.

If the activity will not be a mining project, skip questions 1.0 through 2.5 and begin with question 3.0.

1.0	**Is this a coal mining project?** If "Yes", respond to 1.1-1.6. If "No", skip to Question 2.0. (DEP Use/48y1)	☐	Yes	☒	No
1.1	**Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be equal to or greater than 200 tons/day?** (DEP Use/4x70)	☐	Yes	☒	No
1.2	**Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be greater than 50,000 tons/year?** (DEP Use/4x70)	☐	Yes	☒	No
1.3	**Will this coal mining project involve coal preparation/ processing activities in which thermal coal dryers or pneumatic coal cleaners will be used?** (DEP Use/4x70)	☐	Yes	☒	No
1.4	**For this coal mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?** (DEP Use/4x62)	☐	Yes	☒	No
1.5	**Will this coal mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?** (DEP Use/3140)	☐	Yes	☒	No
1.6	**Will this coal mining project involve underground coal mining to be conducted within 500 feet of an oil or gas well?** (DEP Use/4z41)	☐	Yes	☒	No
2.0	**Is this a non-coal (industrial minerals) mining project?** If "Yes", respond to 2.1-2.6. If "No", skip to Question 3.0. (DEP Use/48y1)	☐	Yes	☒	No
2.1	**Will this non-coal (industrial minerals) mining project involve the crushing and screening of non-coal minerals other than sand and gravel?** (DEP Use/4x70)	☐	Yes	☒	No
2.2	**Will this non-coal (industrial minerals) mining project involve the crushing and/or screening of sand and gravel with the exception of wet sand and gravel operations (screening only) and dry sand and gravel operations with a capacity of less than 150 tons/hour of unconsolidated materials?** (DEP Use/4x70)	☐	Yes	☒	No
2.3	**Will this non-coal (industrial minerals) mining project involve the construction, operation and/or modification of a portable non-metallic (i.e., non-coal) minerals processing plant under the authority of the General Permit for Portable Non-metallic Mineral Processing Plants (i.e., BAQ-PGPA/GP-3)?** (DEP Use/4x70)	☐	Yes	☒	No
2.4	**For this non-coal (industrial minerals) mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?** (DEP Use/4x62)	☐	Yes	☒	No
2.5	**Will this non-coal (industrial minerals) mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?** (DEP Use/3140)	☐	Yes	☒	No

3.0	Will your project, activity, or authorization have anything to do with a well related to oil or gas production, have construction within 200 feet of, affect an oil or gas well, involve the waste from such a well, or string power lines above an oil or gas well? If "Yes", respond to 3.1-3.3. If "No", skip to Question 4.0. (DEP Use/4z41)	☒	Yes	☐	No
3.1	Does the oil- or gas-related project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water (including wetlands)? (DEP Use/4z41)	☐	Yes	☒	No
3.2	Will the oil- or gas-related project involve discharge of industrial wastewater or stormwater to a dry swale, surface water, ground water or an existing sanitary sewer system or storm water system? If "Yes", discuss in *Project Description*. (DEP Use/4z41)	☐	Yes	☒	No
3.3	Will the oil- or gas-related project involve the construction and operation of industrial waste treatment facilities? (DEP Use/4z41)	☐	Yes	☒	No
4.0	Will the project involve a construction activity that results in earth disturbance? If "Yes", specify the total disturbed acreage. (DEP Use/4x66) 4.0.1 Total Disturbed Acreage 3 acres	☒	Yes	☐	No
5.0	Does the project involve any of the following? If "Yes", respond to 5.1-5.3. If "No", skip to Question 6.0. (DEP Use/4x10)	☐	Yes	☒	No
5.1	Water Obstruction and Encroachment Projects – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water? (DEP Use /4x10).	☐	Yes	☒	No
5.2	Wetland Impacts – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a wetland? (DEP Use/4x10).	☐	Yes	☒	No
5.3	Floodplain Projects by the commonwealth, a Political Subdivision of the commonwealth or a Public Utility – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a floodplain? (DEP Use /4x10).	☐	Yes	☒	No
6.0	Will the project involve discharge of stormwater or wastewater from an industrial activity to a dry swale, surface water, ground water or an existing sanitary sewer system or separate storm water system? (DEP Use/4x62)	☐	Yes	☒	No
7.0	Will the project involve the construction and operation of industrial waste treatment facilities? (DEP Use/4x62)	☐	Yes	☒	No
8.0	Will the project involve construction of sewage treatment facilities, sanitary sewers, or sewage pumping stations? If "Yes", indicate estimated proposed flow (gal/day). Also, discuss the sanitary sewer pipe sizes and the number of pumping stations/treatment facilities/name of downstream sewage facilities in the *Project Description*, where applicable. (DEP Use/4x62) 8.0.1 Estimated Proposed Flow (gal/day)	☐	Yes	☒	No
9.0	Will the project involve the subdivision of land, or the generation of 800 gpd or more of sewage on an existing parcel of land or the generation of an additional 400 gpd of sewage on an already-developed parcel, or the generation of 800 gpd or more of industrial wastewater that would be discharged to an existing sanitary sewer system? (DEP Use/4x61).	☐	Yes	☒	No
	9.0.1 Was Act 537 sewage facilities planning submitted and approved by DEP? If "Yes" attach the approval letter. Approval required prior to 105/NPDES approval.	☐	Yes	☒	No
10.0	Is this project for the beneficial use of biosolids for land application within Pennsylvania? If "Yes" indicate how much (i.e. gallons or dry tons per year). (DEP Use/4X62) 10.0.1 Gallons Per Year (residential septage) _____ 10.0.2 Dry Tons Per Year (biosolids)	☐	Yes	☒	No

11.0	**Does the project involve construction, modification or removal of a dam?** If "Yes", identify the dam. (DEP Use/3140) **11.0.1 Dam Name**	☐	Yes	☒	No
12.0	**Will the project interfere with the flow from, or otherwise impact, a dam?** If "Yes", identify the dam. (DEP Use/3140) **12.0.1 Dam Name**	☐	Yes	☒	No
13.0	**Will the project involve operations (excluding during the construction period) that produce air emissions (i.e., NOX, VOC, etc.)?** If "Yes", identify each type of emission followed by the amount of that emission. (DEP Use/4x70) **13.0.1 Enter all types & amounts of emissions; separate each set with semicolons.** NOX <50 TPY CO <25 TPY VOC <25 TPY	☒	Yes	☐	No
14.0	**Does the project include the construction or modification of a drinking water supply to serve 15 or more connections or 25 or more people, at least 60 days out of the year?** If "Yes", check all proposed sub-facilities. (DEP Use/4x81) **14.0.1 Number of Persons Served** _____ **14.0.2 Number of Employee/Guests** _____ **14.0.3 Number of Connections** _____	☐	Yes	☒	No
	14.0.4 Sub-Fac: Distribution System	☐	Yes	☐	No
	14.0.5 Sub-Fac: Water Treatment Plant	☐	Yes	☐	No
	14.0.6 Sub-Fac: Source	☐	Yes	☐	No
	14.0.7 Sub-Fac: Pump Station	☐	Yes	☐	No
	14.0.8 Sub Fac: Transmission Main	☐	Yes	☐	No
	14.0.9 Sub-Fac: Storage Facility	☐	Yes	☐	No
15.0	**Will your project include infiltration of storm water or waste water to ground water within one-half mile of a public water supply well, spring or infiltration gallery?** (DEP Use/4x81) and 4x52).	☐	Yes	☒	No
16.0	**Is your project to be served by an existing public water supply?** If "Yes", indicate name of supplier and attach letter from supplier stating that it will serve the project. (DEP Use/4x81) **16.0.1 Supplier's Name**	☐	Yes	☒	No
	16.0.2 Letter of Approval from Supplier is Attached	☐	Yes	☒	No
17.0	**Will this project involve a new or increased drinking water withdrawal from a stream or other water body?** If "Yes", should reference both Water Supply and Watershed Management. (DEP Use/4x81 and 4x10) **17.0.1 Stream Name**	☐	Yes	☒	No
18.0	**Will the construction or operation of this project involve treatment, storage, reuse, or disposal of waste?** If "Yes", indicate what type (i.e., hazardous, municipal (including infectious & chemotherapeutic), residual) and the amount to be treated, stored, re-used or disposed. (DEP/Use4x32) **18.0.1 Type & Amount** (1) 12,800 gallon Condensate Storage Tank	☒	Yes	☐	No
19.0	**Will your project involve the removal of coal, minerals, etc. as part of any earth disturbance activities?** (DEP Use/48y1)	☐	Yes	☒	No
20.0	**Does your project involve installation of a field constructed underground storage tank?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) **20.0.1 Enter all substances & capacity of each; separate each set with semicolons.**	☐	Yes	☒	No
21.0	**Does your project involve installation of an aboveground storage tank greater than 21,000 gallons capacity at an existing facility?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) **21.0.1 Enter all substances & capacity of each; separate each set with semicolons.**	☐	Yes	☒	No

22.0	Does your project involve installation of a tank greater than 1,100 gallons which will contain a highly hazardous substance as defined in DEP's Regulated Substances List, 2570-BK-DEP2724? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) 22.0.1 Enter all substances & capacity of each; separate each set with semicolons.	☐	Yes	☒	No
23.0	Does your project involve installation of a storage tank at a new facility with a total AST capacity greater than 21,000 gallons? If "Yes", list each Substance & its Capacity. Note: Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) 23.0.1 Enter all substances & capacity of each; separate each set with semicolons.	☐	Yes	☒	No
24.0	Will the intended activity involve the use of a radiation source? (DEP Use/4x90).	☐	Yes	☒	No

CERTIFICATION

I certify that I have the authority to submit this application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information.

Type or Print Name John F. Walsh

Signature	Title	Date
John F Walsh	Chief Operating Officer-Compression Services Laser Northeast Gathering Co., LLC	6-24-4

LASER NORTHEAST GATHERING COMPANY, LLC
LAWRENCE NE FIELD RECEIPT POINT
AND COMPRESSOR STATION

PROCESS NARRATIVE

BACKGROUND

Laser Northeast Gathering Company, LLC ("Laser") wishes to construct, own and operate a compressor station known as the **"Lawrence NE FRP Site"** at a field receipt point (FRP) to receive, compress, and dehydrate produced natural gas from various producers in Susquehanna County, PA. The natural gas will then be delivered to a pipeline (Susquehanna Pipeline, owned and operated by Laser) and moved to New York or other locations where it will enter an interstate or intrastate transmission line.

PROCESS DESCRIPTION

Laser will gather sweet natural gas from Marcellus Shale wells at the point of custody transfer, known as the Lawrence NE field receipt point (FRP) and bring it to this Compressor Station.

Any liquids from the initial separation at the compressor station will be routed to the Wastewater (Condensate) Storage Tank. The wet gas will be routed to either of two (2) medium speed Ariel compressors, each of which are driven by 1775 HP Caterpillar G3606 LE natural gas fired engines. All compressor engines are part of Caterpillar's 3600 Series, lean-burn engines. They are the lowest NO_x producing engines available and so represent Best Available Control Technology (BACT). The 1775 HP engines are four-stroke, six-cylinders (6) with a single turbocharger and a total displacement of 7,762 cubic inches. Emissions from the engines will include NO_x, CO, VOC's, and formaldehyde. All four engines will be equipped with Maxim silencers that include a platinum coated oxidation catalyst. The catalysts will significantly reduce CO, VOC's, and formaldehyde. The engines will be located inside a purpose built compressor building.

The compressed wet gas will enter one of the two triethylene glycol (TEG) dehydrator columns where the gas will pass in the opposite direction to the lean TEG. Any water in the gas is more attracted to the TEG than the gas, and so it moves into the TEG, resulting in rich TEG. The rich TEG from the bottom of the column is heated by one of the two (2) reboilers and, because the boiling point of water (212°F) is much lower than that for TEG (545°F), the water is removed from the TEG as steam, which goes to the still vents. The lean TEG is then returned to the dehydrator for reuse. Because of the significant difference in the boiling points of water and TEG, no TEG is vaporized in the regeneration process, so all the TEG is returned to the system. Historically, emissions of TEG have been small, and in the amount of 0.06 gal/MMSCFg. This loss of TEG is attributed to dehydrator tower blow-by into the natural gas pipeline.

There will also be five (5) aboveground storage tanks including: (1) a 300-barrel condensate wastewater (pipeline fluids) tank which will receive any pipeline liquids from the inlet separators and pigging operations, as well as any liquids collected from equipment skids; (2) a 550-gallon TEG storage tank; (3) 550-gallon coolant storage tank; (4) a 550-gallon lube (mineral) oil storage tank; and, (5) a 550-gallon methanol storage tank. The composition of the liquids in the condensate wastewater tank is anticipated to be mostly water with trace amounts of condensate and/or oil. The methanol is a spray additive to the natural gas as it enters the Susquehanna Pipeline for anti-freeze purposes during the winter, or if the dehydrator should fail to remove sufficient moisture.

BACKGROUND ON MARCELLUS SHALE GAS

Natural gas from shale extraction in the southern part of the United States (Oklahoma and Texas) has been found by lab analysis to contain BTEX (benzene, toluene, ethyl-benzene, and xylene) along with n-hexane, all of which are readily absorbed by TEG in the dehydrator. In those southern states, TEG reboilers emit water vapor plus those HAP VOC's through the reboiler's still-vent to atmosphere. To reduce those emissions, flares or condensing cold traps are used as add-on control devices. GRI-GLYCalc is the software of choice to model the HAP VOC emissions before and after control devices.

Natural gas from the Marcellus Shale region, and specifically from the well sites that will serve this compressor station, is of higher quality than anywhere else in the United States. Our shale gas is almost bone dry compared to other regions. Lab analyses of this gas have found no BTEX, hexane, or any HAP-VOC's. (See attached lab analytical report.)

GRI-GLYCalc was run using inputs of the natural gas constituents from a recent lab analysis of the shale gas that will be coming to this compressor station. Note that the constituent values for the HAP-VOC's were listed in the analytical report to be 0.000. So the software program showed the emissions from each dehydrator's still vent is 0.01 TPY of VOC's, less methane and ethane.

Laser NE Gathering plans to routinely test the natural gas they received from the well sites to be vigilant that the still vents at its compressor sites do not have the potential to release any BTEX or n-hexane. Analytical lab reports will be maintained on-site. If HAP substances are detected by a future lab report, the results will be used in the GRI-GLYCalc model and a report will be generated to DEP for disclosure of the discovered emissions and their rates. If add-on control devices are deemed necessary to maintain the facility's Natural Minor status, a Plan Approval application will be submitted for permit modification, and the control devices will be implemented immediately upon of DEP approval.

DESCRIPTION OF EMISSION UNITS

Herein, please find an application for Plan Approval on the emissions associated with the following activities surrounding the compressor station:

- Exhaust emissions from two (2) compressor engines will include NO_x, CO, VOC's, and HAP's. The 1775 HP engines are 4-stroke lean-burn internal combustion type and have the lowest available NO_x emissions. Each unit is fitted with an air/fuel ratio controller, and an oxidation type catalyst (platinum) to oxidize CO, VOC's, and HAP's. It is our opinion, based on research of the available options, that these engines with the oxidation catalyst represent the Best Available Technology (BAT) in the industry. For permitting, the "Combustion Unit" form is used to permit these emissions.

- Two (2) triethylene glycol dehydration units are bubble cap tray towers, which remove water from the compressed natural gas. The water is released as a vapor through the reboiler's still vent to the outside atmosphere. Two (2) reboilers of a fire-tube boiler design, each with a 1.1 MMBH natural gas-fired burner will emit small amounts of NO_x and CO to the reboiler's flue stack. For these emissions and those below, the "Process" form is used to permit the emissions. To date, no benzene, toluene, ethyl-benzene, xylene (BTEX), or hexane has been detected in the natural gas analyses for this area. Nevertheless, the water vapor exhausted from the still vents may contain trace levels of TEG.

- There is a Produced Water condensate storage tank which may (but not always) have a floating film of hydrocarbons that may be liberated as breathing emissions. Furthermore, there will be VOC emissions associated with removing the condensate by pump from the storage tank to tanker trucks with atmospheric vents, but only to the extent that trace levels of hydrocarbon are present in the Produced Water.

- The facility will have potential for VOC fugitive emissions associated with flanged fittings and valve packing.

- There are emissions associated with various abnormal conditions such as start-up, shutdown, and purging, but these are very short in duration. Engine startup conditions would exist for less than five (5) minutes before the catalyst comes into operating temperature. Engine shutdown takes less than two (2) minutes.

- Methanol is added into the pipeline as antifreeze and is bound up in the pipeline system, traveling with the natural gas post-dehy. As a result, there are no air emissions associated with methanol at the field receipt points; methanol stays with the gas and is added after the emissions points of dehy vents and still vents.

The emissions mapping for this facility are summarized as follows:

Compressor Engine No. 1 ⇨ Catalytic Convertor No. 1 ⇨ Engine Stack No. 1
Compressor Engine No. 2 ⇨ Catalytic Convertor No. 2 ⇨ Engine Stack No. 2

Dehydrator No. 1 ⇨ Still Vent No. 1
Dehydrator No. 2 ⇨ Still Vent No. 2

Reboiler No. 1 ⇨ Flue Vent No. 1
Reboiler No. 2 ⇨ Flue Vent No. 2

300 bbl (Waste Water Condensate) Tank Storage ⇨ Tank Vent
550 gal TEG Storage Tank ⇨ Tank Vent
550 gal Coolant (Ethylene Glycol) Storage Tank ⇨ Tank Vent
550 gal Lube Oil Storage Tank ⇨ Tank Vent
550 gal Methanol Storage Tank ⇨Tank Vent
Fugitive Emission from Valves, Flanges, & Seals

FACILITY-WIDE SUMMARY OF POTENTIAL EMISSIONS IN TPY

	NO_x	CO	VOC	PM	SO_x	HAP[1]
Compressor Engine No. 1 w/catalyst	8.57	0.94	4.64	0.86	---	0.12
Compressor Engine No. 2 w/catalyst	8.57	0.94	4.64	0.86	---	0.12
Dehydrator No. 1 Still Vent	---	---	0.01	---	---	0
Dehydrator No. 2 Still Vent	---	---	0.01	---	---	0
Reboiler No. 1 Flue Vent	0.48	0.40	0.03	0.03	0.003	0.04
Reboiler No. 2 Flue Vent	0.48	0.40	0.03	0.03	0.003	0.04
Condensate Storage Tank	---	---	0.802	---	---	---
Tanker Truck Loading	---	---	0.570	---	---	---
TEG Storage Tank	---	---	0	---	---	---
Coolant Storage Tank	---	---	0	---	---	---
Lube Oil Storage Tank	---	---	0	---	---	---
Methanol Storage Tank	---	---	0.003	---	---	---
Fugitive Emissions	---	---	0.03	---	---	---
TOTAL	18.1	2.68	10.765	1.78	0.006	0.32

Notes: 1. Formaldehyde

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

AIR POLLUTION CONTROL ACT COMPLIANCE REVIEW FORM

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

Type of Compliance Review Form Submittal (check all that apply)

☒ Original Filing
☐ Amended Filing

Date of Last Compliance Review Form Filing: ___/___/____

Type of Submittal

☒ New Plan Approval ☐ New Operating Permit ☐ Renewal of Operating Permit
☐ Extension of Plan Approval ☐ Change of Ownership ☐ Periodic Submission (@ 6 mos)
☐ Other: _____

SECTION A. GENERAL APPLICATION INFORMATION

Name of Applicant/Permittee/("applicant")
(non-corporations-attach documentation of legal name)
Laser Northeast Gathering Company, LLC

Address 1212 S. Abington Road
Clarks Summit, PA 18411

Telephone (570) 319-1800 **Taxpayer ID#** 27-1124915

Permit, Plan Approval or Application ID#

Identify the form of management under which the applicant conducts its business (check appropriate box)

☐ Individual ☐ Syndicate ☐ Government Agency
☐ Municipality ☐ Municipal Authority ☐ Joint Venture
☐ Proprietorship ☐ Fictitious Name ☐ Association
☐ Public Corporation ☐ Partnership ☒ Other Type of Business, specify below:
☐ Private Corporation ☐ Limited Partnership Limited Liability Company

Describe below the type(s) of business activities performed.

Natural Gas gathering, compression, dehydration, metering and delivery into third-party interstate (and possibly intrastate) pipelines.

SECTION B. GENERAL INFORMATION REGARDING "APPLICANT"

If applicant is a corporation or a division or other unit of a corporation, provide the names, principal places of business, state of incorporation, and taxpayer ID numbers of all domestic and foreign parent corporations (including the ultimate parent corporation), and all domestic and foreign subsidiary corporations of the ultimate parent corporation with operations in Pennsylvania. Please include all corporate divisions or units, (whether incorporated or unincorporated) and privately held corporations. (A diagram of corporate relationships may be provided to illustrate corporate relationships.) Attach additional sheets as necessary.

Unit Name	Principal Places of Business	State of Incorporation	Taxpayer ID	Relationship to Applicant
N/A				

SECTION C. SPECIFIC INFORMATION REGARDING APPLICANT AND ITS "RELATED PARTIES"

Pennsylvania Facilities. List the name and location (mailing address, municipality, county), telephone number, and relationship to applicant (parent, subsidiary or general partner) of applicant and all Related Parties' places of business, and facilities in Pennsylvania. Attach additional sheets as necessary.

Unit Name	Street Address	County and Municipality	Telephone No.	Relationship to Applicant
Laser Northeast Gathering Company, LLC	1212 S. Abington Rd., 1st Floor Clarks Summit, PA 18411	South Abington Twp. Lackawanna County	(570) 319-1800	Regional Office

Provide the names and business addresses of all general partners of the applicant and parent and subsidiary corporations, if any.

Name	Business Address
N/A	

List the names and business address of persons with overall management responsibility for the process being permitted (i.e. plant manager).

Name	Business Address
William C. Stevens	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411
Dale Harper	333 Clay St., Suite 4500, Houston, TX 77002
Tom Karam	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411
John F. Walsh	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411

Plan Approvals or Operating Permits. List all plan approvals or operating permits issued by the Department or an approved local air pollution control agency under the APCA to the applicant or related parties that are currently in effect or have been in effect at any time 5 years prior to the date on which this form is notarized. This list shall include the plan approval and operating permit numbers, locations, issuance and expiration dates. Attach additional sheets as necessary.

Air Contamination Source	Plan Approval/ Operating Permit#	Location	Issuance Date	Expiration Date
N/A				

Compliance Background. (Note: Copies of specific documents, if applicable, must be made available to the Department upon its request.) List all documented conduct of violations or enforcement actions identified by the Department pursuant to the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification. Unless specifically directed by the Department, deviations which have been previously reported to the Department in writing, relating to monitoring and reporting, need not be reported.

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status: Litigation Existing/Continuing or Corrected/Date	Dollar Amount Penalty
N/A						$
						$
						$
						$
						$
						$
						$
						$
						$
						$

List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Litigation Existing/Continuing Or Corrected/Date
N/A				

CONTINUING OBLIGATION. Applicant is under a continuing obligation to update this form using the Compliance Review Supplemental Form if any additional deviations occur between the date of submission and Department action on the application.

VERIFICATION STATEMENT

Subject to the penalties of Title 18 Pa.C.S. Section 4904 and 35 P.S. Section 4009(b)(2), I verify under penalty of law that I am authorized to make this verification on behalf of the Applicant/Permittee. I further verify that the information contained in this Compliance Review Form is true and complete to the best of my belief formed after reasonable inquiry. I further verify that reasonable procedures are in place to ensure that "documented conduct" and "deviations" as defined in 25 Pa Code Section 121.1 are identified and included in the information set forth in this Compliance Review Form.

Signature	Date
John F. Walsh	
Name (Print or Type)	
Chief Operating Officer – Compression Services, Laser Northeast Gathering Company, LLC	
Title	

EXHIBIT 6

Clean Air Council

Philadelphia
135 South 19th Street
Suite 300
Philadelphia, PA 19103
215-567-4004
Fax 215-567-5791
E-Mail members@cleanair.org
www.cleanair.org

Harrisburg
107 N. Front St.
Suite 113
Harrisburg, PA 17101
717-230-8806
Fax 717-230-8808

Wilmington
Community Service Building
100 W. 10th St.
Suite 106
Wilmington, DE 19801
302-691-0112

August 15, 2011

Via Electronic and First Class Mail

Ray Kempa
Chief, New Source Review Section
Air Quality Program
Pennsylvania Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18701-1915

Re: Laser Northeast Gathering Co., LLC
Plan Approval Nos.: 58-399-016, 58-399-017, 58-399-018, 58-399-019

Dear Mr. Kempa,

Clean Air Council ("Council" or "Commenters") hereby submits the following comments in response to the Pennsylvania Department of Environmental Protection's ("PA DEP") notice of receipt and intent to issue Plan Approval Nos. 58-399-016, 58-399-017, 58-399-018, 58-399-019 to Laser Northeast Gathering Co., LLC ("Laser") for the construction of four natural gas compressor stations in Susquehanna County, Pennsylvania.

Plan Approval No. 58-399-016 is for the construction of a natural gas compressor station at the Snake Creek FRP Site in Liberty Township. The station will consist of two CAT G3606LE engines and two dehydrators and reboilers. Plan Approval No. 58-399-017 is for the construction of a natural gas compressor station at the Lane Road FRP Site in Middletown Township. The station will consist of two CAT G3606LE engines and two dehydrators and reboilers. Plan Approval No. 58-399-018 is for the construction of a natural gas compressor station at the Kane Road FRP Site in Forest Lake Township. The station will consist of two CAT G3606LE engines and two dehydrators and reboilers. Plan Approval No. 58-399-019 is for the construction of a natural gas compressor station at the Lawrence NE FRP Site in Liberty Township. The station will consist of two CAT G3606LE engines and two dehydrators and reboilers. The four Plan Approval applications are identical and the Council's foregoing comments apply to each.

Clean Air Council is a non-profit environmental organization headquartered at

135 S. 19th St., Suite 300, Philadelphia PA 19103. The Council has members throughout Pennsylvania. For more than 40 years, the Council has fought to improve the air quality across Pennsylvania. The Council's mission is to protect everyone's right to breathe clean air.

Background/Introduction:

On June 24, 2011, PA DEP received Plan Approval applications 58-399-016, 58-399-017, 58-399-018, 58-399-019 ("Laser Plan Approvals") from Laser. PA DEP published notice of receipt of the Laser Plan Approvals and the intent to issue them in the July 16, 2011, *Pennsylvania Bulletin*. On July 15, 2011, the Council sent a "Request to Review Files," via facsimile to the Northeast Regional PA DEP Office to review the Laser Plan Approvals. Comments for these Plan Approvals are due August 15, 2011. The first date made available to the Council to review the files was August 24, 2011, nine days AFTER the comments were due. After further calls, August 3, 2011 and August 4, 2011 were made available and the Council performed a review of the Laser Plan Approvals on August 4, 2011. The Council was informed that PA DEP's decision to only provide the Council with the Plan Approval applications and to deny the Council access to the proposed Plan Approval(s), PA DEP's analysis and other documents used in the evaluation of the applications was in accordance with 25 PA. CODE § 127.44 (2008) and that this would be the only opportunity for comment.

Comments:

1. PA DEP Failed to Provide the Public with Adequate Opportunity to Comment.

PA DEP did not comply with its notification in the *Pennsylvania Bulletin* for the Laser Plan Approvals, the Pennsylvania Code or the Pennsylvania State Implementation Plan ("SIP"). PA DEP must therefore extend the comment period until copies of the application, proposed plan approval, PA DEP's analysis and other documents used in the evaluation of the application can be made available to the public for review.

In accordance with 25 PA CODE § 127.45(a)(6) (2008), the notice of receipt and intent to issue for each plan approval must include a statement that a person may oppose the proposed plan approval by filing a written protest with the PA DEP. This requirement necessitates that the public have access to the proposed plan approval during the comment period.

PA DEP must also prepare a notice for each action taken on a plan approval, including receipt, intent to issue, and issuance, in accordance with the requirements of 25 PA CODE § 127.45(b) (2008), where PA DEP has determined that there is substantial public interest. The Council would like to know what efforts PA DEP made with respect to the Laser Plan Approvals, to determine whether there is substantial public interest and further invites PA DEP to make that determination. The Council, and its members, certainly has a substantial interest in the permitting of these four compressor stations.

The notice in the *Pennsylvania Bulletin* for the Laser Plan Approvals indicates that "[c]opies of the application, DEP's analysis and other documents used in the evaluation of the application are

available for public review during normal business hours at Air Quality Program..."[1] PA DEP's analysis and other documents used in the evaluation of the applications were not made available to the Clean Air Council despite the Council's request to review them.

Further, the rules for notification cited by PA DEP violate Pennsylvania's federally approved SIP. On May 24, 2008, the Environmental Quality Board ("EQB") set forth "Air Quality Permit Streamlining" in the *Pennsylvania Bulletin*.[2] The EQB approved rules reduced the notice requirements for minor source permits. The "Air Quality Permit Streamlining" notice indicated that "[t]he final-form rulemaking will be submitted to the United States Environmental Protection Agency (EPA) as a revision to Pennsylvania's [SIP] codified in 40 CFR 52.2020 (relating to identification of the plan)."[3] Further, the Board acting under authorizing statutes ordered that: "[t]his final-form rulemaking will be submitted to the EPA as an amendment to the Pennsylvania [SIP]."[4] However, this rulemaking was never submitted to the EPA and the current Pennsylvania SIP reflects the rules effective as of November 26, 1994.[5]

The Pennsylvania SIP requires that "[t]he Department will prepare a notice of action to be taken on applications for plan approvals for the following: ...sources required to obtain plan approval."[6] This would require notification in accordance with § 127.45 of the Pennsylvania SIP when *any* action is taken on a plan approval application.

PA DEP did not provide notice in accordance with its own July 16, 2011, *Pennsylvania Bulletin* notice, the Pennsylvania Code or the Pennsylvania SIP. The Council requests that the PA DEP extend the comment period until copies of the application, proposed plan approval, PA DEP's analysis and other documents used in the evaluation of the application can be made available to the public for review.

2. PA DEP Must Perform a Proper Single-Source Determination.

An accurate source determination is an absolute prerequisite to an adequate demonstration that PA DEP is in compliance with New Source Review ("NSR"), Prevention of Significant Deterioration ("PSD") and the Title V Permit program. The provisions of PA DEP's NSR, PSD and Title V Permit program are approved by the EPA incorporated in Pennsylvania's SIP at 40 CFR Part 52.2020. Because the federal PSD requirements promulgated by the EPA are adopted and incorporated by reference in their entirety PA DEP must apply EPA guidance consistently and properly in interpreting and implementing the Commonwealth's Air Program.[7]

On September 22, 2009, Gina McCarthy, Assistant Administrator for the EPA's Office of Air and Radiation, issued a memo entitled "Withdrawal of Source Determinations for Oil and Gas

[1] 41 Pa.B. 3870 (July 16, 2011).
[2] 38 Pa.B. 2365 (May 24, 2008).
[3] *Id.*
[4] *Id.*
[5] 61 FR 39597 (July 30, 1996).
[6] *Id.*
[7] 25 Pa. Code § 127.83. These regulatory provisions were adopted June 17, 1983, effective June 18, 1983, 13 Pa.B. 1940.

Industries" to Regional Administrators, which emphasized a fact-specific case-by-case approach for single source determinations. In making source determinations in the oil and gas industry, permitting authorities should rely foremost on the three regulatory criteria for identifying emissions activities that belong to the same "building," "structure," "facility," or "installation." The three regulatory criteria are: (1) whether the activities are under the control of the same person (or persons under common control); (2) whether the activities are located on one or more contiguous or adjacent properties; and (3) whether the activities belong to the same industrial grouping.[8]

In the recent decision *In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station,* EPA Administrator Jackson provides guidance on single source determinations in the natural gas context:

> In order to do a thorough analysis, I [EPA Administrator, Lisa P. Jackson] recommend that CDPHE [Colorado Department of Public Health and Environment] evaluate Kerr-McGee's complete system map showing all emission sources owned or operated by the Company in the Wattenberg gas field (located primarily in Weld County, Colorado) and determine whether the various pollution-emitting activities are contiguous or adjacent to, and under common control with, the Frederick Compressor Station...I also recommend that CDPHE obtain from Kerr-McGee/Anadarko a flow diagram showing the movement of gas from the well sites to the various facilities in the Wattenberg field operated by both Kerr-McGee/Anadarko and other companies in the field, so that CDPHE may determine the nature of the sources' emissions and determine whether or not the process units associated with those emission sources are interdependent on the operation of the Frederick Compressor Station. Finally, I recommend that CDPHE obtain from Kerr-McGee/Anadarko business information regarding the nature of control of the Frederick Station and nearby wells between the Company and other companies in the field to determine whether various pollution emitting activity should be considered under common control for purposes of making the source determination.[9]

PA DEP must first determine what air emission sources Laser owns in the areas surrounding these four proposed compressor stations, including but not limited to, wells, processing plants, tanks and the various engines associated with the extraction and production of natural gas. PA DEP must then determine how these various sources, including but not limited to, the four proposed compressor stations are interconnected and dependent upon one another. Once the facility is properly defined PA DEP must determine the potential to emit and whether it meets the major facility threshold.

3. PA DEP Must Comply with the GHG Tailoring Rule.

The Council urges PA DEP to evaluate and address greenhouse gas ("GHG") emissions when evaluating the Laser Plan Approvals, in accordance with the GHG Tailoring Rule.

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[8] *See* 40 CFR § 52.21.

[9] *In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station,* Petition VII-2008-02 (Order on Petition) (Oct. 8, 2009).

On May 13, 2010, the U.S. EPA issued a final rule addressing GHG emissions from stationary sources under the CAA permitting programs. This Tailoring Rule set thresholds for GHG emissions that define when permits under the NSR/PSD and Title V Operating Permit programs are required for new and existing industrial facilities. The Tailoring Rule addresses emissions of a group of six GHGs, including methane ("CH_4") and carbon dioxide ("CO_2").

The Tailoring Rule provisions, codified in 40 CFR § 52.21, were automatically adopted and incorporated by reference in the *Pennsylvania Code* and became effective in the Commonwealth on August 2, 2010.

During Step 1 of this Rule, which began on January 1, 2011, only sources currently subject to the PSD permitting program were subject to permitting requirements for their GHG emissions under PSD. Step 2 began on July 1, 2011 and will last until June 30, 2013. During this Step, PSD permitting requirements will cover new construction projects that emit GHG emissions of at least 100,000 CO_2 equivalent ("CO_2e") tons per year ("tpy"), even if they do not exceed the permitting thresholds for any other pollutant. Modifications at existing facilities that increase GHG emissions by at least 75,000 tpy CO_2e will be subject to permitting requirements, even if they do not significantly increase emissions of any other pollutant.

CH_4 is the major component of natural gas and twenty times more potent a GHG than CO_2e. Title V will be triggered for a new source at approximately 5,000 tpy of CH_4 and for an existing facility at approximately 3,750 tpy. Emissions of GHGs from natural gas operations include indirect emissions of CO_2 from fossil fuels used to extract, develop, and transport the gas and CH_4 from fugitive emissions and venting. The applications indicate that PA DEP has not required, and Laser has not provided, the potential to emit GHGs for the four proposed compressor stations. To make an accurate source determination, PA DEP must know the potential to emit GHGs at the Laser compressor stations.

4. <u>The Council Urges PA DEP to Require Laser to Install Proven and Commercially Available Control Technology and Undertake Best Management Practices.</u>

Oil and gas operations, including exploration, production and processing operations, consist of many pieces of equipment and practices that release air pollutants known to be harmful to public health and welfare. The impact on air quality includes emissions of volatile organic compounds (VOCs), nitrogen oxide, particulates and hazardous air pollutants. VOCs and nitrogen oxides mix with air and sunlight to produce ground-level ozone, which causes a variety of respiratory problems, while the emission of hazardous air pollutants is linked to elevated levels of cancer and neurological health issues.

The impacts of oil and gas development on air quality are by no means insignificant. Areas of the country that have more fully developed their shale plays are experiencing significant effects from the cumulative impacts of oil and gas production:

- A 2009 Southern Methodist University study found summertime emissions of smog-forming pollutants from the oil and gas sector in the Dallas-Fort Worth area exceed emissions from motor vehicles.[10]
- A 2008 analysis by the Colorado Department of Public Health and Environment concluded that smog-forming emissions from Colorado's oil and gas operations exceed vehicle emissions for the entire state.[11]
- In 2009, for the first time in the state's history, Wyoming failed to meet federal health-based standards for air pollution. According to the Wyoming Department of Environmental Quality, emissions from the state's growing oil and gas sector are to blame.[12]
- In northeastern Utah, unprecedented ozone levels in the Uintah Basin were recorded last year, and the Bureau of Land Management has identified the multitude of oil and gas wells in the region as the primary cause of the ozone pollution.[13]
- An April 2011, report from the Texas Oil and Gas Accountability Project, gives voice to the families and communities on the front lines of a public health crisis that is spreading from the Barnett Shale region in North Central Texas to other parts of the state. It pulls together detailed results of air and water testing as well as health effects data linking residents' symptoms to toxic chemicals used in drilling and hydraulic fracturing.[14]
- Cornell ecologist, Robert Howarth, in a recent study, found that methane (a potent global warming gas) leakage from hydraulic fracturing offsets the lesser carbon emissions that burning natural gas gives off in comparison to other fossil fuels. While natural gas has been touted as a clean-burning fuel that produces less carbon dioxide than coal, Howarth warns that we should be more concerned about methane leaking into the atmosphere during hydraulic fracturing.[15]

The Clean Air Council urges PA DEP to perform a thorough review of best management practices and control technologies and require those that will reduce these harmful effects to the greatest extent possible.

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[10] Al Armendariz, Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (Jan. 26, 2009), *available at:* http://www.edf.org/documents/9235_Barnett_Shale_Report.pdf.

[11] Colorado Dept. of Public Health & Environment, Air Pollution Control Division, Oil and Gas Emission Sources Presentation for the Air Quality Control Commission Retreat (May 15, 2008) at pages 3-4.

[12] WYDEQ, Technical Support Document I for Recommended 8-Hour Ozone Designation For the Upper Green River Basin, WY, p. viii (Mar. 26, 2009), *available at:* http://deq.state.wy.us/out/downloads/Ozone%20TSD_final_rev%203-30-09_jl.pdf.

[13] Scott Streater, Air Quality Concerns May Dictate Uintah Basin's Natural Gas Drilling Future, N.Y. Times, Oct. 1, 2010, *available at*: http://www.nytimes.com/gwire/2010/10/01/01greenwire-air-quality-concerns-may-dictate-uintah-basins-30342.html?pagewanted=1.

[14] Texas Oil & Gas Accountability Project, Earthworks, Natural Gas Flowback: How the Texas Natural Gas Boom Affects Health and Safety (Apr. 2011) *available at*: http://earthworksaction.org/FLOWBACK-TXOGAP-HealthReport-lowres.pdf.

[15] Robert W. Howarth, et al., Methane and the greenhouse-gas footprint of natural gas from shale formations, a letter, Climactic Change (Apr. 12, 2011) *available at*: http://www.springerlink.com/content/e384226wr4160653/fulltext.pdf.

Conclusion:

First, governmental decisions in a democracy should be transparent. Transparency enables citizens to influence policy outcomes and to trust and accept the decision. Transparency is especially critical for governmental decisions that promote public health and welfare, such as those made under federal and state environmental laws. Access to information is the foundation of transparency in environmental decision-making. The PA DEP has indicated in a policy memorandum that they recognize the value and power of information.[16] The PA DEP also notes its commitment to improving public access to environmental information and fostering public participation in environmental decision-making.[17] In accordance law and this policy, the Council urges PA DEP to make the proposed plan approval(s), PA DEP's analysis and other documents used in the evaluation of the applications available for public comment.

Second, oil and gas operations, including exploration, production, and processing operations, consist of many pieces of equipment and practices that release a number of air pollutants known to be harmful to public health and welfare. Ensuring that pollutant emitting activities associated with oil and gas operations are aggregated together, where appropriate, is necessary to ensure that required pollution controls are installed and to ensure greater accountability to protecting health and welfare-based air quality standards.

Finally, PA DEP must request information regarding the potential to emit GHGs in accordance with the GHG Tailoring Rule and should engage in a full review of and require the best available control technology and best management practices as conditions to the Laser Plan Approvals.

Thank you for the opportunity to comment. Please keep us apprised of any future actions related to proposed Plan Approval Nos. 58-399-016, 58-399-017, 58-399-018, 58-399-019.

Sincerely,

Joseph Otis Minott, Esq.
Executive Director

[16] Public Access to Information and Right to Know Law Policy (DEP ID: 012-0200-005) (June 3, 2010).
[17] *Id.*

EXHIBIT 7

[Continued from previous Web Page]

AIR QUALITY

PLAN APPROVAL AND OPERATING PERMIT APPLICATIONS NEW SOURCES AND MODIFICATIONS

The Department has developed an "integrated" plan approval, State Operating Permit and Title V Operating Permit program. This integrated approach is designed to make the permitting process more efficient for the Department, the regulated community and the public. This approach allows the owner or operator of a facility to complete and submit permitting documents relevant to its application one time, affords an opportunity for public input and provides for sequential issuance of the necessary permits.

The Department received applications for Plan Approvals or Operating Permits from the following facilities.

Copies of these applications, subsequently prepared draft permits, review summaries and other support materials are available for review in the regional office listed before the applications. Persons interested in reviewing the application files should contact the appropriate regional office to schedule appointments.

Persons wishing to receive a copy of a proposed Plan Approval or Operating Permit shall indicate interests to the Department regional office within 30 days of the date of this notice and shall file protests or comments on a proposed Plan Approval or Operating Permit within 30 days of the Department providing a copy of the proposed documents to persons or within 30 days of its publication in the *Pennsylvania Bulletin*, whichever comes first. Interested persons may also request that hearings be held concerning a proposed Plan Approval or Operating Permit. A comment or protest filed with the Department regional office shall include a concise statement of the objections to the issuance of the Plan Approval or Operating Permit and relevant facts which serve as the basis for the objections. If the Department schedules a hearing, a notice will be published in the *Pennsylvania Bulletin* at least 30 days prior the date of the hearing.

Persons with a disability who wish to comment and require an auxiliary aid, service or other accommodation to participate should contact the regional office listed before the application. TDD users may contact the Department through the Pennsylvania AT&T Relay Service at (800) 654-5984.

Final Plan Approvals and Operating Permits will contain terms and conditions to ensure that the source is constructed and operating in compliance with applicable requirements in 25 Pa. Code Chapters 121—143, the Federal Clean Air Act (42 U.S.C.A. §§ 7401—7671q) and regulations adopted under the Federal Clean Air Act.

PLAN APPROVALS

Receipt of Plan Approval Applications and Intent to Issue Plan Approvals, and Intent to Issue Amended Operating Permits under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter B And Subchapter F. These actions may include the administrative amendments of an associated operating permit.

58-399-023: Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be in Dimock Township, **Susquehanna County**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a), the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, Ste. 4500, Houston, TX 77002-4102) for their facility to be located in Dimock Township, Susquehanna County. This Plan Approval No. 58-399-023 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-023 is for the construction of a natural gas compressor station at the Shields Compressor Station. The station will consist of four CAT G3616 engines and three dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code § 127.12(a)(5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20% at any time. The company shall be subject to and comply with 25 PA Code § 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following:

Name, address and telephone number of the person submitting the comments.

Identification of the proposed permit No.: 58-399-023.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

A public hearing may be held, if the Department of Environmental Protection, in its discretion, decides that such a hearing is warranted based on the comments received. All persons submitting comments or requesting a hearing will be notified of the decision to hold a hearing by publication in the newspaper or the *Pennsylvania Bulletin* or by telephone, where DEP determines such notification is sufficient. Written comments or requests for a public hearing should be directed to Ray Kempa, Chief, New Source Review Section, Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915, Phone # 570-826-2511 within 30 days after publication date.

[Continued on next Web Page]

EXHIBIT 8

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST REGIONAL OFFICE

August 18, 2011

Mr. Dale R. Harper
Vice President – Engineering
Laser Northeast Gathering Company, LLC
333 Clay Street, Suite 4500
Houston, TX 77022

Re: Acceptance/Administrative Completeness Letter
Laser Northeast Gathering Company, LLC
Shields Compressor Station
Plan Approval Application No. 58-399-023
Dimock Township, Susquehanna County

Dear Mr. Harper:

On August 4, 2011, the Department of Environmental Protection (DEP) received the above referenced application. We have determined that the application contains the necessary documents and is administratively complete.

The administrative completeness review is the first in a series of reviews conducted by DEP. To help you better understand the application review process, a brief explanation of the permit application review process and approximate times are outlined on the enclosed Permit Application Review Process Fact Sheet.

Your permit application is eligible for DEP's Money-Back Guarantee Program. The program establishes that your Air Quality Permit application must be acted on within 180 days or the application fee will be returned. The program is explained in more detail on the enclosed Fact Sheet.

I hope you find this information helpful in understanding the application review process. If you have additional questions about your application, please contact Neal Elko at 570-826-2524 and refer to Plan Approval Application No. 58-399-023.

Sincerely,

Raymond Kempa, Jr.

Raymond Kempa, Jr., P.E.
Environmental Engineer Manager
Air Quality Program

Enclosure - Permit Process Information

cc: Paul Jennings, Dimock Township Secretary
Sylvia Beamer, Susquehanna County Chief Clerk

PERMIT# 58-399-023 STATUS REVIEW EXPIRATION DATE ________

COMPANY LASER NORTHEAST GATHERING CO LLC SC U COUNTY CODE 58

LOCATION DIMOCK TOWNSHIP COUNTY SUSQUEHANNA LOCODE 58910

SOURCE COMPRESSOR STATION - SHIELDS PERMIT TYPE 1

STATUS CODES (SC): UNDER REVIEW NEWS PUBLICATION DIRECTOR'S OFFICE
X(INACTIVE) PLAN APPROVAL TEMPORARY PERMIT OPERATING PERMIT

PERMIT TYPES: (1)REGULAR (2)P S D (3)N S P S (4)AIR TOXICS
(5)N S R (6)N E S H A P (7)WASTE FUELS (8)R A C T (M)MINOR AMEND

ENGINEER ELKO

RECEIVED 8/04/2011 PLAN APPROVAL ISSUED ________
TARGET DATE 11/17/2011 PERMIT INSPECTION/ISSUE DATE ________

C 283677

S 751479

APS 757042

AUTH 890662

Acct# 705717

(Feelrans) 2080364

Check ✓
Book ✓
Folder
BarCode ✓
Letter
GIF ✓

A REC/ISS
8/16/11

interoffice memo - NSR Section

Date: 8/4/2011

To: [redacted] / Neal Elko /[redacted]

From: Raymond Kempa

Through: Neal Elko

RE: New Plan Approval Application

Accepted Complete date : 8/1/2011

eFacts Coding input : M1SP5

- Application fee
- General Info. Form
- Compliance Review Form
- Copy of Co./Muni. notification
- Proof of Co./Muni. notification
- Appropriate application
- Addendum A – Source Applicable Requirements (Title V only)

NORTHEAST GATHERING COMPANY, LLC

LASER

AUG - 1 2011

July 28, 2011

Pennsylvania Department of Environmental Protection
Air Quality Program
Northeast Regional Office
Two Public Square
Wilkes-Barre, PA 18711

Re: Plan Approval Application for the Shields Compressor Station to be Located in Dimock Township, Susquehanna County, Pennsylvania

Dear Engineering Services Chief:

Enclosed please find three (3) copies of a Plan Approval Application for the proposed installation of the Shields Compressor Station to be located in Dimock Township, Susquehanna County, Pennsylvania.

A check is enclosed in the amount of $1,700 for the application fee.

If you have any questions about the application or need any additional information about the project, please do not hesitate to contact me at (570) 319-1800.

Sincerely,

Jack Walsh
COO Compression Services
Laser Northeast Gathering Company, LLC
1212 South Abington Road
Clarks Summit, PA 18411

Plan Approval Application for
Laser Northeast Gathering Company, LLC
Shields Compressor Station
Dimock Township, Susquehanna County, PA

Submitted to:

Pennsylvania Department of Environmental Protection
Air Quality Program
Northeast Region
Two Public Square
Wilkes-Barre, PA 18711

Prepared for:

Laser Northeast Gathering Company, LLC
1212 South Abington Road, 1st Floor
Clarks Summit, PA 18411

Prepared by:

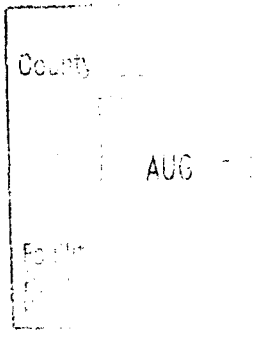
Liberty Environmental, Inc.
50 N. Fifth Street, 5th Floor
Reading, PA 19601

July 2011

NORTHEAST GATHERING COMPANY LLC

LASER

July 28, 2011



Pennsylvania Department of Environmental Protection
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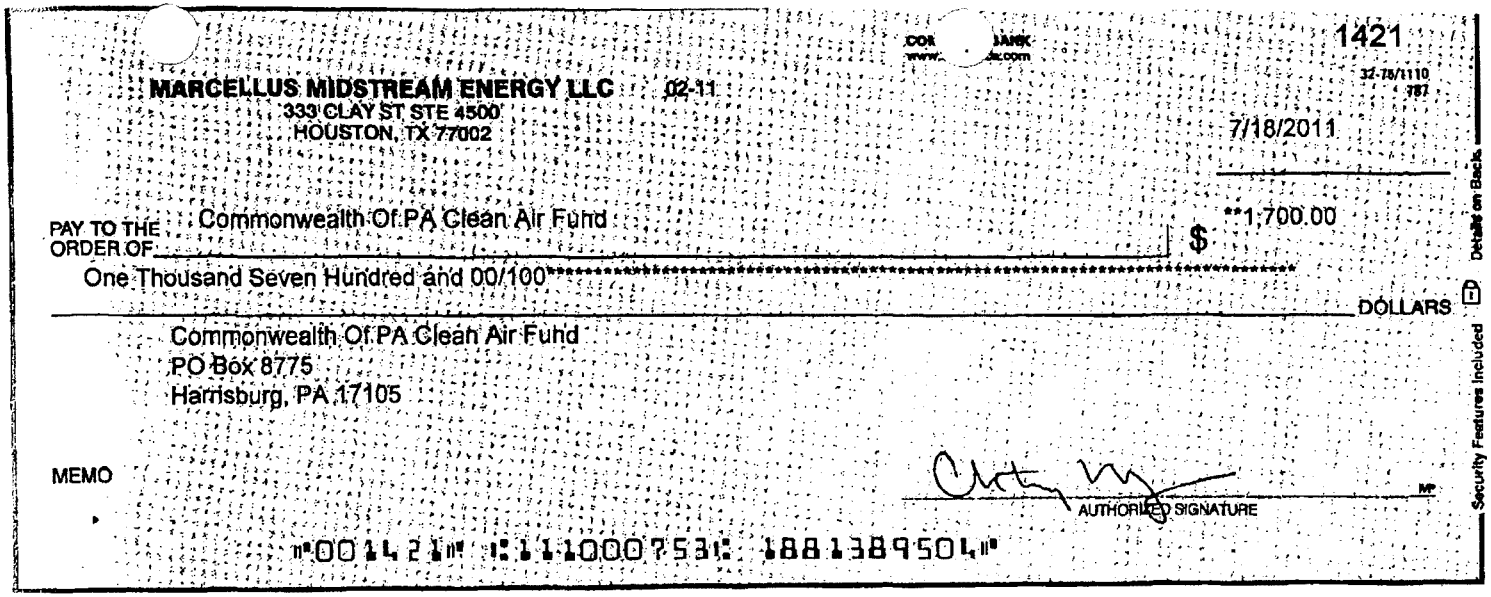

MARCELLUS MIDSTREAM ENERGY LLC 02-11
333 CLAY ST STE 4500
HOUSTON, TX 77002

1421
32-75/1110
787

7/18/2011

PAY TO THE ORDER OF Commonwealth Of PA Clean Air Fund $ **1,700.00

One Thousand Seven Hundred and 00/100********** DOLLARS

Commonwealth Of PA Clean Air Fund
PO Box 8775
Harrisburg, PA 17105

MEMO

AUTHORIZED SIGNATURE

Details on Back. Security Features Included

⑈001421⑈ ⑆111000753⑆ 1881389504⑈

MARCELLUS MIDSTREAM ENERGY LLC 1421

Commonwealth Of PA Clean Air Fund 7/18/2011

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
7/15/2011	Bill	7/15/2011	1,700.00	1,700.00		1,700.00
					Check Amount	1,700.00

Comerica Bank 1,700.00

DIM0208687

DIM0208603

Plan Approval Application for
Laser Northeast Gathering Company, LLC
Shields Compressor Station
Dimock Township, Susquehanna County, PA

Submitted to:

Pennsylvania Department of Environmental Protection
Air Quality Program
Northeast Region
Two Public Square
Wilkes-Barre, PA 18711

Prepared for:

Laser Northeast Gathering Company, LLC
1212 South Abington Road, 1st Floor
Clarks Summit, PA 18411

Prepared by:

Liberty Environmental, Inc.
50 N. Fifth Street, 5th Floor
Reading, PA 19601

July 2011

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1.4 PROJECT SCHEDULE

Preliminary engineering and design for the proposed new equipment has been completed. Laser would like to install the compressor station in Fourth Quarter 2011. Laser requests that the DEP consider the following schedule for review and approval of this submittal:

- Plan approval application submittal — July 2011
- Completeness determination — August 2011
- Plan approval issued — October 2011

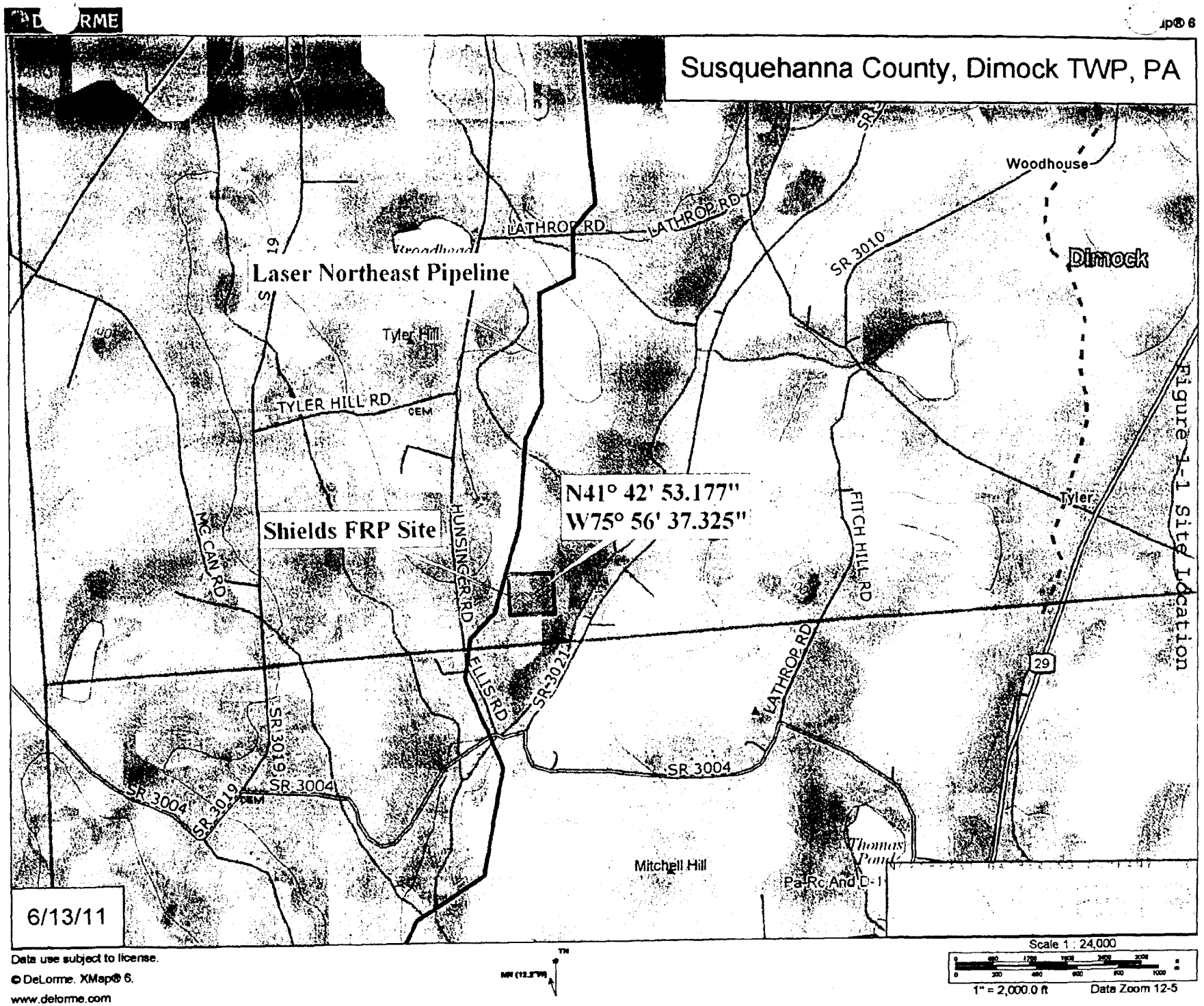
1.5 REPORT ORGANIZATION

This report has been prepared to provide DEP with the necessary information to review and approve Laser's proposed project. This report consists of the following sections and appendices:

- Section 1, Introduction – provides an overview of the project, project schedule, and report organization.
- Section 2, Process Description – describes the proposed facility operations.
- Section 3, Emission Inventory – summarizes criteria air pollutant emission estimates for the project.
- Section 4, Applicable Requirements – summarizes applicable federal and DEP air quality requirements and provides compliance demonstration methods for each requirement.
- Section 5, Best Available Technology (BAT) Analysis – provides Laser's determination of BAT for the proposed modifications.
- Appendix A, DEP Plan Approval Application Forms – includes the General Information Form (GIF) and Plan Approval application forms.
- Appendix B, Municipal Notification Letters – provides copies of municipal notification letters and proof of delivery.
- Appendix C, Technical Data – this includes the Maxim Silencers data on the compressor engines and the typical natural gas analysis
- Appendix D, Supporting Emissions Calculations

Figure 1-1

Site Location



DIM0208693

DIM0208603

2. PROJECT DESCRIPTION

Laser will gather sweet natural gas from Marcellus Shale wells at the point of custody transfer and bring it to the Shields Compressor Station. Some of the gas may have gone through initial physical separation at the wellhead. However, the gas will still pass through separators and Triethylene Glycol (TEG) dehydrators to process the gas before being routed to the compressor engines to raise the pressure so that it can enter the pipeline.

The wet gas will be routed to the compressors, which will consist of four, 4,735 hp, Caterpillar 3616 engines (SC161, SC162, SC163, SC164). All four are part of Caterpillar's 3600 Series, lean-burn engines. They are the lowest NOx producing engines available and so represent Best Available Technology (BAT). The 4735-hp units are four-stroke with 16 cylinders and twin turbochargers. Each has a total displacement is 20,698 cubic inches. Emissions from the engines will include VOCs, NOx, CO and formaldehyde. All four engines will be equipped with Maxim silencers that include a platinum coated oxidation catalyst (CDX061, CX062, CX063 and CX161). The catalysts will significantly reduce CO, VOCs and formaldehyde. The engines will be located inside a purpose built compressor building.

Figure 2-1 provides a schematic showing the components of the gas dehydration system. A total of three (3) TEG dehydrators with the capacity to process 80 MMSCF/D of gas will be included. The compressed wet gas will enter the TEG dehydrator column, where the gas will pass in the opposite direction to the lean TEG. Any water in the gas is more attracted to the TEG than the gas and so it moves into the TEG, resulting in rich TEG. The dry gas will be routed to the compressors. The rich TEG is heated by the reboilers (3-0.5 MMBTU/Hr gas fired units) and, because the boiling point of water is much lower than that for TEG, the water is removed from the TEG as steam, which is routed to the still vents (SDSV1, SDSV2 and SDSV3). The still vents are sources of VOC emissions and potential sources of HAP emissions as described below.

The lean TEG is returned to the dehydrator for reuse. Because of the significant differences in the boiling points of water (210 °F) and TEG (545 °F) no TEG is vaporized in the regeneration process and all the TEG is returned to the system. Consequently there are no emissions of TEG.

However, a number of years ago it was discovered that not only does the water prefer to be in the TEG, but Hazardous Air Pollutants (HAPs) such as Benzene, Ethyl benzene, Toluene and Xylene (BTEX) that are normal components of most natural gas, also move to the TEG in the process. As the BTEX volatilizes at relatively low pressure and temperature, the steam going to the still vents can also include these HAPs (although as explained above not any TEG). The BTEX HAP emissions from TEG dehydrators are not a product of combustion, but get passed through the system as a naturally occurring component of the gas. However, analyses of the Marcellus Shale gas show that it does not contain any HAPs (see typical gas analysis in Appendix D). Because there are no HAPs in the inlet gas, there are no HAPs to move into the rich TEG and no HAPs to volatize in the regeneration process and be vented through the dehydrator still vent. Therefore, as there are no HAP emissions, with dehydrator control devices are not required for the dehydrators. However, the gas will be periodically re-analyzed and, if the composition at some future date changes and BTEX is present in the gas at levels that would trigger the need to control the emissions, the dehydrators will be retrofitted with the appropriate control equipment (for example BTEX Eliminator). The eliminator is designed to reduce the temperature of the vapors from the reboiler still so that any hydrocarbons in the vapor are reduced to below their dew point and so can be collected as liquids.

There will also be four aboveground storage tanks including: a 300-barrel wastewater (pipeline fluids) storage tank which will receive any pipeline liquids from the inlet separators and pigging operations, as well as any liquids collected from equipment skids; a 550-gallon TEG storage tank; 550-gallon coolant storage tank; and 550-gallon lube oil storage tank. Any liquids from the initial separation at the compressor station will be routed to the Wastewater Storage Tank. The composition of the liquids in the wastewater tank is anticipated to be mostly water with trace amounts of condensate and/or oil. The waste water is loaded into tank trucks and hauled off-site. VOC emissions are estimated for the loading of the waste water in the trucks.

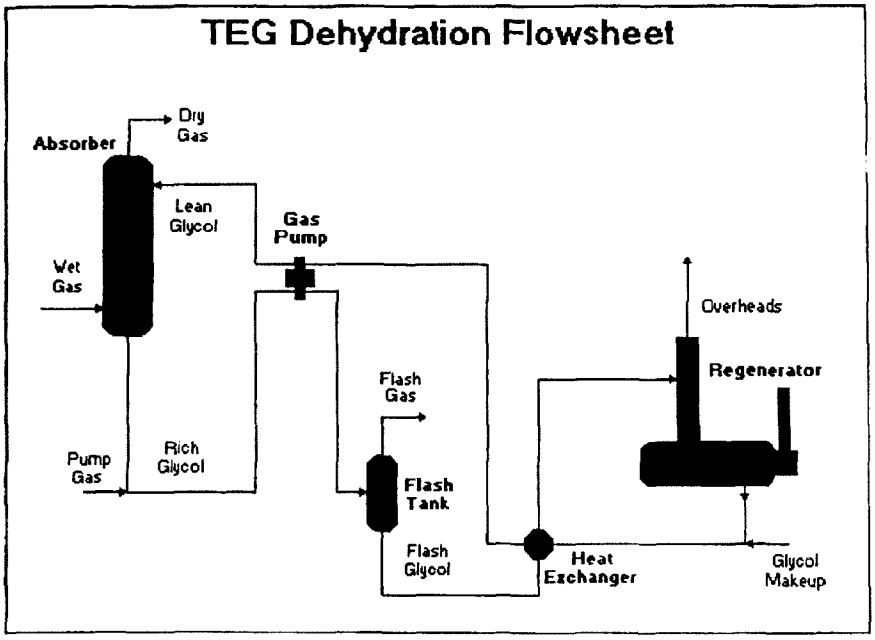
Table 1 – Emission Sources

Source ID	Source	Comments
SC161	Compressor Engine	4,375 hp Caterpillar G3616 Gas Fired
	Catalytic Converter	Maxim QAC Model: MCCOS-1200
SC162	Compressor Engine	4,375 hp Caterpillar G3616 Gas Fired
	Catalytic Converter	Maxim QAC Model: MCCOS-1200
SC163	Compressor Engine	4,375 hp Caterpillar G3616 Gas Fired
	Catalytic Converter	Maxim QAC Model: MCCOS-1200
SC164	Compressor Engine	4,375 hp Caterpillar G3616 Gas Fired
	Catalytic Converter	Maxim QAC Model: MCCOS-1200
SDSV1	Dehydrator Still Vent	Dehydrator #1
	TEG Dehydrator Reboiler	0.5 MMBTU/Hr Reboiler Gas Fired
SDSV2	Dehydrator Still Vent	Dehydrator #2
	TEG Dehydrator Reboiler	0.5 MMBTU/Hr Reboiler Gas Fired
SDSV3	Dehydrator Still Vent	Dehydrator #3
	TEG Dehydrator Reboiler	0.5 MMBTU/Hr Reboiler Gas Fired
ST01	Waste Water Storage Tank	300-barrel above ground fixed roof tank
ST02	TEG Storage Tank	550-gallon above ground fixed roof tank
ST03	Coolant Storage Tank	550-gallon above ground fixed roof tank
ST04	Lube Oil Storage Tank	550-gallon above ground fixed roof tank
	Compressor Maintenance Emissions	From purging during compressor maintenance
	Fugitive Emissions	From pumps, valves, piping and connections on compressor station equipment
	Truck Loading Emissions	From loading tank trucks with waste water

Figure 2-1

Glycol Dehydrator Schematic

Figure 2-1 Glycol Dehydrator Schematic



3. PROJECT EMISSIONS

Emissions from the proposed project are from the compressor engines, the dehydrators (including the dehydrator reboilers, the still vents, the process equipment fugitive emissions, the maintenance emissions and the tank emissions), and the truck loading emissions. Emissions estimates for the compressor engines are based on information provided by Maxim Silencers, the control equipment manufacturer. Emissions from the glycol dehydrators were estimated using GRI GYL-Calc Version 4.0. GLY-Calc is a program developed specifically for glycol dehydrator emissions estimation and is suggested for use by US EPA and state environmental agencies. The tank emissions were calculated using US EPA TANKS 4.09D.

The potential emissions for the compressor station are provided in Table 3-1. Potential emissions are calculated based on operation of all emission units at rated capacities for 8,760 hours per year. Natural gas combustion emissions are estimated based on EPA AP-42 emission factors and vendor emissions data. The emissions from the Maxim silencers that include platinum coated oxidation catalyst are based on emission factors provided by the manufacturer. Potential emissions are shown to be less than the Title V and New Source Review major source thresholds for each criteria pollutant.

Greenhouse gas (CO2e) emissions were calculated using greenhouse gas reporting factors found in the tables of 40 CFR Part 98 and are included in Table 3-1. Methane emissions estimated by GLY-Calc were included and were converted to CO2e using the conversion factor in Part 98. Potential CO2e emissions are shown to be less than 100,000 tpy, the major source threshold for greenhouse gases under the Tailoring Rule.

Table 3-1
Site Emissions Summary

Site Name: **SHIELDS COMPRESSOR STATION - TOTAL SITE EMISSIONS**
Site-Wide Totals
Emissions, tpy
Notes: 4 COMPRESSOR ENGINES - 100%
4 CAT G3616
SUSQUEHANNA COUNTY PENNSYLVANIA

EPN or DESCRIPTION	VOC	NO_x	CO	SO_2	PM_{10}	Formaldehyde	Other vHAPs	All vHAPs	CO_2e
SC161, SC162, SC163, SC164	36.5772	91.4431	9.1443	0.3339	5.6710	1.0242	2.3115	3.3356	65,412
MAINTENANCE EMISSIONS	0.0040							0.0000	
FUGITIVE EMISSIONS	0.0168							0.0000	
3 DEHY REBOILERS	0.0356	0.6480	0.5443	0.0039	0.0492	0.0005	0.0117	0.0122	782
SDSV1, SDSV2 & SDSV3	9.7812							0.0000	12,557
TRUCKLOADING	0.0616							0.0000	
ST01 (WASTE WATER)	1.0130							0.0000	
ST02 (TEG)	0.0000							0.0000	
ST03 (COOLANT)	0.0006							0.0000	
ST04 (LUBE OIL)	0.0000							0.0000	
TOTAL	**47.4900**	**92.0911**	**9.6886**	**0.3378**	**5.7202**	**1.0246**	**2.3232**	**3.3478**	**78,750**
MAJOR SOURCE THRESHOLD	***50***	***100***	***100***	***100***	***100***	***10***	***10 / 25***	***10 / 25***	***100,000***

4. APPLICABLE REQUIREMENTS

This section provides an overview of potentially applicable Federal and Pennsylvania state air quality requirements for the proposed compressor station project. Federal air regulations are reviewed in Subsection 4.1 and Pennsylvania state air regulations are reviewed in Subsection 4.2.

4.1 FEDERAL REQUIREMENTS

4.1.1 Title V and CAM Requirements

As a minor source of air emissions, Laser is not required to hold a Title V permit. Therefore Title V and Compliance Assurance Monitoring (CAM) requirements under 40 CFR Parts 70 and 64, respectively, do not apply to this proposed project.

4.1.2 New Source Performance Standards

The potential applicable NSPS include the following:

- 40 CFR Part 60, Subpart Dc is applicable to fuel-fired heat transfer equipment with heat input capacity of 10 MMBTU/hr or more. This standard does not apply to the glycol reboilers as their maximum heat input is less than 10 MMBTU/hr.
- 40 CFR Part 60, Subpart KKK is applicable to equipment leaks of Volatile Organic Compounds (VOCs) at onshore natural gas processing plants. This standard does not apply to the Shields Compressor Station as it is not an onshore natural gas processing plant.
- 40 CFR Part 60, Subpart LLL is applicable to SO2 emissions from onshore natural gas processing. This standard applies to facilities that separate the H2S and CO2 contents from sour natural gas. Sour natural gas will not be handled at this facility, in addition, the Shields Compressor Station is not an onshore gas processing plant, and so Subpart LLL does not apply.
- 40 CFR Part 60, Subpart Kb is applicable to Volatile Organic Liquid (VOL) storage tanks constructed after the implementation date with capacities greater than or equal to 19,800

gallons. Subpart Kb does not apply to the operations at Shields Compressor Station as there will be no tanks containing VOLs that have a capacity greater than 19,800 gallons.

- 40 CFR Part 60, Subpart JJJJ is applicable to spark ignition internal combustion engines. An explanation of how the NSPS JJJJ and IIII and the NESHAPS ZZZZ fit together is presented at the bottom of this regulatory review. The compressor engines at the Shields Compressor Station are subject to Subpart JJJJ.
- 40 CFR Part 60, Subpart IIII is applicable to compression ignition internal combustion engines. An explanation of how the NSPS JJJJ and IIII and the NESHAPS ZZZZ fit together is presented at the bottom of this regulatory review. There will be no compression ignition engines at the Shields Compressor Station, and therefore the facility is not subject to Subpart IIII.

4.1.3 Prevention of Significant Deterioration (PSD)

Sources subject to PSD regulations are new "major stationary sources" and "major modifications" to baseline major stationary sources located in areas designated as attainment or unclassifiable for the National Ambient Air Quality Standards (NAAQS). Because the proposed project is not a major source, PSD requirements do not apply.

4.1.4 National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP standards promulgated prior to the 1990 Clean Air Act Amendments (CAAA) are found in 40 CFR Part 61 and apply to seven specific compounds emitted from specific sources. Pursuant to the CAAA of 1990, NESHAP specific to processes identified that emit an additional 189 air pollutants are promulgated in 40 CFR Part 63.

In 2004, U.S. EPA promulgated Subpart DDDDD, a new potentially applicable NESHAP for Industrial, Commercial and Institutional Boilers and Process Heaters. However, this standard applies to combustion units located at major sources of hazardous air pollutants (HAPs). The Laser facility is not a major source of HAPs. Therefore this standard does not apply to the proposed project.

The potentially applicable NESHAPS include:

- 40 CFR Part 63, Subpart HH is applicable to oil and natural gas production facilities that process, upgrade or store natural gas prior to the point of custody transfer and are either major sources or area sources of Hazardous Air Pollutants (HAPs). A major source of HAPs is a facility that emits 10 tpy of an individual HAP, or 25 tpy of all HAPs combined. An area source is a facility that emits HAPs at levels below the major source definition. Examples of facilities in the oil and natural gas production source category include, well sites, tank batteries, a compressor station that transports natural gas to a natural gas processing plant and natural gas processing plants. The Shields Compressor Station does not process, upgrade or store natural gas prior to the point of custody transfer and so Subpart HH is not applicable.
- 40 CFR Part 63, Subpart HHH, is applicable to natural gas and transmission and storage facilities that are major sources of HAPs (emit 10 tpy of an individual HAP or 25 tpy of aggregated HAPs) and that transport or store natural gas prior to entering a pipeline to a local distribution company or to a final end user if there is no local distribution company. This standard does not apply to the Shields Compression Station because it is not a major source of HAPs and also because it does not transport gas to a local distribution or final end user.
- 40 CFR Part 63, Subpart ZZZZ, is applicable to Stationary Reciprocating Internal Combustion Engines (RICE) located at a facility that is a major source or area source of HAPs. An explanation of how the NSPS JJJJ and IIII and the NESHAPS ZZZZ fit together is presented below. The compressor engines at the Shields Compressor Station are subject to Subpart ZZZZ

How the engine NSPS JJJJ and IIII and the NESHAPS ZZZZ fit together:

- There are three main regulations that the EPA has developed to regulate combustion engines. The first one that was implemented is the NESHAPS Subpart ZZZZ, which establishes emission limits and operating limits for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. The second regulation is the NSPS JJJJ which regulates the emissions from spark ignition reciprocating engines, and includes recordkeeping and

reporting requirements. Finally, the third regulation, IIII, regulates the emissions from compression ignition reciprocating engines, which typically include emergency generators and fire pumps. So, ZZZZ controls HAP emissions from all engines and then JJJJ addresses emissions from spark ignition engines and IIII from the compression ignition ones. If the compressors are located at an area source of HAPs, depending on the size and nature of the engines involved, compliance with ZZZZ can be achieved by complying with the applicable sections of JJJJ or IIII.

- The Shields Compressor Station is subject to ZZZZ and JJJJ, but not IIII. As previously explained, the HAP emissions at the Shields Station will be well below the major source definition and so the facility will be considered an area source of HAPs. Compliance with the applicable requirements of ZZZZ will be achieved by complying with the applicable requirements of JJJJ.
- The engines are required to meet the following emission limits under Subpart JJJJ: 2.0 grams/horsepower-hour for NOx, 4.0 grams/horsepower-hour for CO, and 1.0 grams/horsepower-hour for VOCs. As explained above, the engines will be fitted with Maxim Silencers that include oxidation catalysts and, according to the vendor provided data, the engines will be in compliance with the emission limits. In fact, the engines meet these limits even without the silencers, but the silencers have the benefit of significantly reducing the formaldehyde emissions. Laser will keep records of engine maintenance and will have a maintenance plan. The engines will be operated and maintained according to the manufacturer's emission-related written instructions. Laser will also comply with the applicable notifications, reporting, and recordkeeping requirements in 40 CFR 60.4245

4.1.5 Greenhouse Gas Reporting (Part 98)

USEPA requires large combustion sources to report greenhouse gas (GHG) emissions beginning in January 2010 under 40 CFR Part 98. The Part 98 applicability threshold for combustion sources is 30 MMBtu/hr combined heat input capacity. Laser will comply with the Part 98 reporting requirements.

4.2 PENNSYLVANIA REQUIREMENTS

4.2.1 Particulate Matter Emissions

The particulate matter emission (PM) limits for "processes" at 25 PA Code Section 123.13 applies to the compressor engines. Section 123.13(c)(1)(i) imposes a PM emission limit of 0.04 gr/dscf at the compressor engine exhausts. Laser estimates maximum PM emission rates to be 0.324 lb/hr per engine, which corresponds to a PM concentration of about 0.003 gr/dscf in the engine exhausts. Therefore, the proposed PM emission rates for the compressor engines meet 25 PA Code Section 123.13 requirements.

4.2.2 Malodor/Visible/Fugitive Emissions

Visible fugitive emissions are prohibited from certain source types at 25 PA Code Section 123.1 In addition, 25 PA Code Section 123.2 requires that fugitive emissions from certain sources listed in 25 PA Section 123.1 not be visible beyond the property line. Emissions of malodorous compounds are limited by 25 PA Code Section 123.31 which prohibits the emission of malodors that are detectable beyond the facility property line. Visible emissions from exhaust stacks are limited by 25 PA Code Section 123.41 to an opacity of 20% with opacity up to 60% permitted for no more than three (3) minutes in any one hour or 60% at any time. The Laser Shields compressor station will comply with these requirements. The compressor engines are not expected to exhibit any visible emissions during normal operations. No malodorous emissions are expected from the dehydrator operations based on the gas analysis and the expectation that sulfurous compounds in the gas will not be significant. Visible fugitive emissions are not expected from the station's operations.

4.2.3 Sulfur Compound Emissions

Sulfur compound emissions from source exhausts are limited to 500 ppmv, dry basis, SO2 per 25 PA Code Section 123.21. The estimated engine exhaust SO2 emission rates are much lower than this limit. The gas analysis did not identify the presence of sulfur compounds in the shale gas

that is expected to be processed at the station. Therefore, the sources are expected to meet the 25 PA Code Section 123.21 requirements.

4.2.4 Pennsylvania Air Permitting - 25 PA Code Chapter 127

4.2.4.1 Plan Approval Requirements

The Pennsylvania Plan Approval requirements are listed in 25 PA Code Sections 127.11 through 127.52 (Subchapter B). Sources subject to these requirements must obtain approval from the Department prior to construction, modification, or reactivation of a source or the installation of an air cleaning device. This application package is submitted in fulfillment of the application requirements of Subchapter B.

Additionally, 25 PA Code Section 127.12 requires that the applicant demonstrate that the emission from the source will be the minimum attainable through the use of the Best Available Technology (BAT). Section 5 of this report contains a BAT analysis demonstrating that the design and controls for the proposed compressor engines and gas processing operations represents BAT.

4.2.4.2 New Source Review

The Pennsylvania non-attainment New Source Review (NSR) requirements are listed in 25 PA Code Sections 127.201 through 127.217 (Subchapter E). Sources subject to non-attainment NSR regulations are new facilities and modifications to baseline facilities located in areas designated as non-attainment for the National Ambient Air Quality Standards (NAAQS). Modifications to facilities with the potential to emit 100 tons per year or more of NOx or 50 tons per year or more of VOC are potentially subject to NSR. The Shields Compressor Station is not a major facility for NOx or VOC and is therefore not subject to NSR permitting requirements for NOx and VOC.

5. BAT ANALYSIS

Laser proposes to install Caterpillar 3616 lean-burn compressor engines. The Caterpillar 3600 series engines employ large amounts of excess air to reduce combustion temperatures to minimize NOx formation. The proposed 3616 engines are designed to meet a NOx emission limit of 0.5 g/bhp. The use of lean-burn combustion technology to minimize NOx emissions is considered to represent best available technology (BAT) for control of NOx emissions from natural gas compressor engines.

Laser proposes to equip the engines with oxidation catalysts to control emissions of CO, VOC, and formaldehyde. The Maxim catalyst system will achieve CO and formaldehyde removal efficiencies of 98% and VOC removal efficiency of 69%. The use of oxidation catalysts is considered to represent BAT for control of CO and VOC emissions from natural gas compressor engines.

Laser proposes to process incoming gas (other than gas that has been processed prior to the Shields station) to remove moisture prior to introducing the gas as fuel to the compressor engines.

In summary, Laser is proposing to install natural gas compressor engines equipped with lean burn low-NOx combustion technology and oxidation catalysts to reduce CO and VOC emissions. The guaranteed emission rates from the catalyst vendor, Maxim, are consistent with recent plan approvals issued by PA DEP for other natural gas compressor station engines.

APPENDIX A
DEP PLAN APPROVAL APPLICATION FORMS

8000-PM-IT0001 Rev. 10/2009
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

GENERAL INFORMATION FORM – AUTHORIZATION APPLICATION

Before completing this General Information Form (GIF), read the step-by-step instructions provided in this application package. This version of the General Information Form (GIF) must be completed and returned with any program-specific application being submitted to the Department.

Related ID#s (If Known)		DEP USE ONLY
Client ID#	APS ID#	Date Received & General Notes
Site ID#	Auth ID#	AUG
Facility ID#		

CLIENT INFORMATION

DEP Client ID#	Client Type / Code
	LLC

Organization Name or Registered Fictitious Name	Employer ID# (EIN)	Dun & Bradstreet ID#
Laser Northeast Gathering Company, LLC	271124915	

Individual Last Name	First Name	MI	Suffix	SSN

Additional Individual Last Name	First Name	MI	Suffix	SSN

Mailing Address Line 1	Mailing Address Line 2
333 Clay Street	Suite 4500

Address Last Line – City	State	ZIP+4	Country
Houston	TX	77022	USA

Client Contact Last Name	First Name	MI	Suffix
Harper	Dale	R	

Client Contact Title	Phone	Ext
Vice President – Engineering	713-655-9500	

Email Address	FAX
dharper@lasermidstream.com	713-920-9471

SITE INFORMATION

DEP Site ID#	Site Name
	Shields Compressor Station

EPA ID#	Estimated Number of Employees to be Present at Site

Description of Site
The facility is located on a fenced site within which a 3-acre natural gas compressor station will be built. The compressor station will consist of 4 Caterpillar 3616 compressors, three TEG dehydrators and above ground tanks.

County Name	Municipality	City	Boro	Twp	State
Susquehanna	Dimock	☐	☐	☒	
County Name	**Municipality**	**City**	**Boro**	**Twp**	**State**
		☐	☐	☐	

Site Location Line 1	Site Location Line 2
State Route 3021	

Site Location Last Line – City	State	ZIP+4
Springville	PA	18844

Detailed Written Directions to Site
Take PA-309 N Go 7.0 Mi. Turn SLIGHT RIGHT onto TUNKHANNOCK HWY / PA-309 N. Continue to follow PA-309 N. PA-309 N is just past DALLAS VILLAGE SHOPPING CTR Go 8.3 Mi. PA-309 N becomes PA-29. Go 21.1 Mi. Turn LEFT onto PA-3004. PA-3004 is just past CLAUDE AVERY ST If you reach ACADEMY ST you've gone a little too far. Go 0.2 Mi. Take the 1st RIGHT to stay on PA-3004. If you are on PA-3006 and reach MITCHELL LN you've gone about 0.4 miles too far. Go 1.0 Mi. Turn LEFT to stay on PA-3004. Go 1.0 Mi. Take the 1st LEFT to stay on PA-3004. If you are on PA-3021 and reach PA-3010 you've gone about 1.6 miles too far. Go 0.09 Mi. Take the 1st RIGHT onto ELLIS RD / TOWNSHIP RD 382. Continue to follow TOWNSHIP RD 382. If you reach PA-3019 you've gone about 1.0 mile too far. Go 0.4 Mi. HUNSINGER RD. If you reach TOWNSHIP RD 435 you've gone about 0.6 miles too far.

Site Contact Last Name	First Name	MI	Suffix
Stevens	Curtis		

Site Contact Title	Site Contact Firm
Operations	Laser Northeast Gathering Company, LLC

Mailing Address Line 1	Mailing Address Line 2
1212 South Abington Road	1st Floor

Mailing Address Last Line – City	State	ZIP+4
Clarks Summit	PA	18411

Phone	Ext	FAX	Email Address
570-319-1800		570-319-1820	

NAICS Codes (Two- & Three-Digit Codes – List All That Apply)	6-Digit Code (Optional)
48	486210

Client to Site Relationship
OWNOP

FACILITY INFORMATION

Modification of Existing Facility	Yes	No
1. Will this project modify an existing facility, system, or activity?	☐	☒
2. Will this project involve an addition to an existing facility, system, or activity?	☐	☒

If "Yes", check all relevant facility types and provide DEP facility identification numbers below.

	Facility Type	DEP Fac ID#		Facility Type	DEP Fac ID#
☐	Air Emission Plant		☐	Industrial Minerals Mining Operation	
☐	Beneficial Use (water)		☐	Laboratory Location	
☐	Blasting Operation		☐	Land Recycling Cleanup Location	
☐	Captive Hazardous Waste Operation		☐	MineDrainageTrmt/LandRecyProjLocation	
☐	Coal Ash Beneficial Use Operation		☐	Municipal Waste Operation	
☐	Coal Mining Operation		☐	Oil & Gas Encroachment Location	
☐	Coal Pillar Location		☐	Oil & Gas Location	
☐	Commercial Hazardous Waste Operation		☐	Oil & Gas Water Poll Control Facility	
☐	Dam Location		☐	Public Water Supply System	
☐	Deep Mine Safety Operation -Anthracite		☐	Radiation Facility	
☐	Deep Mine Safety Operation -Bituminous		☐	Residual Waste Operation	
☐	Deep Mine Safety Operation -Ind Minerals		☐	Storage Tank Location	
☐	Encroachment Location (water, wetland)		☐	Water Pollution Control Facility	
☐	Erosion & Sediment Control Facility		☐	Water Resource	
☐	Explosive Storage Location		☐	Other:	

Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
	41	42	53	75	56	37

Horizontal Accuracy Measure Feet --or-- Meters

Horizontal Reference Datum Code
- ☐ North American Datum of 1927
- ☒ North American Datum of 1983
- ☐ World Geodetic System of 1984

Horizontal Collection Method Code

Reference Point Code

Altitude Feet --or-- Meters

Altitude Datum Name
- ☐ The National Geodetic Vertical Datum of 1929
- ☐ The North American Vertical Datum of 1988 (NAVD88)

Altitude (Vertical) Location Datum Collection Method Code

Geometric Type Code

Data Collection Date

Source Map Scale Number Inch(es) = Feet
--or-- Centimeter(s) = Meters

PROJECT INFORMATION

Project Name
Shields Compressor Station

Project Description
Sweet natural gas from the Marcellus Shale will be gathered and delivered to the Shields Compressor Station located on a fenced site. Some of the gas may have undergone physical separation in the field and then will be compressed to pipeline pressure. The gas will be routed to the Triethylene Glycol (TEG) dehydrators to ensure that the gas will meet pipeline specifications.

Project Consultant Last Name	First Name	MI	Suffix
Hart	Donald	R	Jr.

Project Consultant Title	Consulting Firm
Project Manager	Liberty Environmental, Inc.

Mailing Address Line 1	Mailing Address Line 2
50 North 5th Street	5th Floor

Address Last Line – City	State	ZIP+4
Reading	PA	19601

Phone	Ext	FAX	Email Address
610-375-9301	215	610-375-9302	dhart@libertyenviro.com

Time Schedules	Project Milestone (Optional)
4th Quarter 2011	Construction to begin
4th Quarter 2011	Startup of Operation

1.	**Have you informed the surrounding community and addressed any concerns prior to submitting the application to the Department?**	☒	Yes	☐	No
2.	**Is your project funded by state or federal grants?**	☐	Yes	☒	No
	Note: If "Yes", specify what aspect of the project is related to the grant and provide the grant source, contact person and grant expiration date. Aspect of Project Related to Grant Grant Source: _____ Grant Contact Person: _____ Grant Expiration Date: _____				
3.	**Is this application for an authorization on Appendix A of the Land Use Policy? (For referenced list, see Appendix A of the Land Use Policy attached to GIF instructions)**	☒	Yes	☐	No
	Note: If "No" to Question 3, the application is not subject to the Land Use Policy. If "Yes" to Question 3, the application is subject to this policy and the Applicant should answer the additional questions in the **Land Use Information** section.				

LAND USE INFORMATION

Note: Applicants are encouraged to submit copies of local land use approvals or other evidence of compliance with local comprehensive plans and zoning ordinances.

1.	**Is there an adopted county or multi-county comprehensive plan?**	☒	Yes	☐	No
2.	**Is there an adopted municipal or multi-municipal comprehensive plan?**	☐	Yes	☒	No
3.	**Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance?**	☒	Yes	☐	No
	Note: If the Applicant answers "No" to either Questions 1, 2 or 3, the provisions of the PA MPC are not applicable and the Applicant does not need to respond to questions 4 and 5 below. If the Applicant answers "Yes" to questions 1, 2 and 3, the Applicant should respond to questions 4 and 5 below.				
4.	**Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval?** If zoning approval has been received, attach documentation.	☐	Yes	☐	No
5.	**Have you attached Municipal and County Land Use Letters for the project?**	☐	Yes	☐	No

COORDINATION INFORMATION

Note: The PA Historical and Museum Commission must be notified of proposed projects in accordance with DEP Technical Guidance Document 012-0700-001 and the accompanying Cultural Resource Notice Form.

If the activity will be a mining project (i.e., mining of coal or industrial minerals, coal refuse disposal and/or the operation of a coal or industrial minerals preparation/processing facility), respond to questions 1.0 through 2.5 below.

If the activity will not be a mining project, skip questions 1.0 through 2.5 and begin with question 3.0.

1.0	**Is this a coal mining project?** If "Yes", respond to 1.1-1.6. If "No", skip to Question 2.0. (DEP Use/48y1)	☐	Yes	☒	No
1.1	**Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be equal to or greater than 200 tons/day?** (DEP Use/4x70)	☐	Yes	☐	No
1.2	**Will this coal mining project involve coal preparation/ processing activities in which the total amount of coal prepared/processed will be greater than 50,000 tons/year?** (DEP Use/4x70)	☐	Yes	☐	No
1.3	**Will this coal mining project involve coal preparation/ processing activities in which thermal coal dryers or pneumatic coal cleaners will be used?** (DEP Use/4x70)	☐	Yes	☐	No
1.4	**For this coal mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?** (DEP Use/4x62)	☐	Yes	☐	No
1.5	**Will this coal mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?** (DEP Use/3140)	☐	Yes	☐	No
1.6	**Will this coal mining project involve underground coal mining to be conducted within 500 feet of an oil or gas well?** (DEP Use/4z41)	☐	Yes	☐	No
2.0	**Is this a non-coal (industrial minerals) mining project?** If "Yes", respond to 2.1-2.6. If "No", skip to Question 3.0. (DEP Use/48y1)	☐	Yes	☐	No
2.1	**Will this non-coal (industrial minerals) mining project involve the crushing and screening of non-coal minerals other than sand and gravel?** (DEP Use/4x70)	☐	Yes	☒	No
2.2	**Will this non-coal (industrial minerals) mining project involve the crushing and/or screening of sand and gravel with the exception of wet sand and gravel operations (screening only) and dry sand and gravel operations with a capacity of less than 150 tons/hour of unconsolidated materials?** (DEP Use/4x70)	☐	Yes	☐	No
2.3	**Will this non-coal (industrial minerals) mining project involve the construction, operation and/or modification of a portable non-metallic (i.e., non-coal) minerals processing plant under the authority of the General Permit for Portable Non-metallic Mineral Processing Plants (i.e., BAQ-PGPA/GP-3)?** (DEP Use/4x70)	☐	Yes	☐	No
2.4	**For this non-coal (industrial minerals) mining project, will sewage treatment facilities be constructed and treated waste water discharged to surface waters?** (DEP Use/4x62)	☐	Yes	☐	No
2.5	**Will this non-coal (industrial minerals) mining project involve the construction of a permanent impoundment meeting one or more of the following criteria: (1) a contributory drainage area exceeding 100 acres; (2) a depth of water measured by the upstream toe of the dam at maximum storage elevation exceeding 15 feet; (3) an impounding capacity at maximum storage elevation exceeding 50 acre-feet?** (DEP Use/3140)	☐	Yes	☐	No

3.0	**Will your project, activity, or authorization have anything to do with a well related to oil or gas production, have construction within 200 feet of, affect an oil or gas well, involve the waste from such a well, or string power lines above an oil or gas well?** If "Yes", respond to 3.1-3.3. If "No", skip to Question 4.0. (DEP Use/4z41)	☒	Yes	☐	No
3.1	**Does the oil- or gas-related project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water (including wetlands)?** (DEP Use/4z41)	☐	Yes	☒	No
3.2	**Will the oil- or gas-related project involve discharge of industrial wastewater or stormwater to a dry swale, surface water, ground water or an existing sanitary sewer system or storm water system?** If "Yes", discuss in *Project Description*. (DEP Use/4z41)	☐	Yes	☒	No
3.3	**Will the oil- or gas-related project involve the construction and operation of industrial waste treatment facilities?** (DEP Use/4z41)	☐	Yes	☒	No
4.0	**Will the project involve a construction activity that results in earth disturbance?** If "Yes", specify the total disturbed acreage. (DEP Use/4x66) **4.0.1 Total Disturbed Acreage** 3	☒	Yes	☐	No
5.0	**Does the project involve any of the following?** If "Yes", respond to 5.1-5.3. If "No", skip to Question 6.0. (DEP Use/4x10)	☐	Yes	☒	No
5.1	**Water Obstruction and Encroachment Projects – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a watercourse, floodway or body of water?** (DEP Use /4x10).	☐	Yes	☐	No
5.2	**Wetland Impacts – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a wetland?** (DEP Use/4x10).	☐	Yes	☐	No
5.3	**Floodplain Projects by the commonwealth, a Political Subdivision of the commonwealth or a Public Utility – Does the project involve any of the following: placement of fill, excavation within or placement of a structure, located in, along, across or projecting into a floodplain? (DEP** Use /4x10).	☐	Yes	☐	No
6.0	**Will the project involve discharge of stormwater or wastewater from an industrial activity to a dry swale, surface water, ground water or an existing sanitary sewer system or separate storm water system?** (DEP Use/4x62)	☐	Yes	☒	No
7.0	**Will the project involve the construction and operation of industrial waste treatment facilities?** (DEP Use/4x62)	☐	Yes	☒	No
8.0	**Will the project involve construction of sewage treatment facilities, sanitary sewers, or sewage pumping stations?** If "Yes", indicate estimated proposed flow (gal/day). Also, discuss the sanitary sewer pipe sizes and the number of pumping stations/treatment facilities/name of downstream sewage facilities in the *Project Description*, where applicable. (DEP Use/4x62) **8.0.1 Estimated Proposed Flow (gal/day)**	☐	Yes	☒	No
9.0	**Will the project involve the subdivision of land, or the generation of 800 gpd or more of sewage on an existing parcel of land or the generation of an additional 400 gpd of sewage on an already-developed parcel, or the generation of 800 gpd or more of industrial wastewater that would be discharged to an existing sanitary sewer system?** (DEP Use/4x61).	☐	Yes	☒	No
	9.0.1 Was Act 537 sewage facilities planning submitted and approved by DEP? If "Yes" attach the approval letter. Approval required prior to 105/NPDES approval.	☐	Yes	☐	No
10.0	**Is this project for the beneficial use of biosolids for land application within Pennsylvania?** If "Yes" indicate how much (i.e. gallons or dry tons per year). (DEP Use/4X62) **10.0.1 Gallons Per Year (residential septage)** _____ **10.0.2 Dry Tons Per Year (biosolids)**	☐	Yes	☒	No

11.0	**Does the project involve construction, modification or removal of a dam?** If "Yes", identify the dam. (DEP Use/3140)	☐	Yes	☒	No
	11.0.1 Dam Name				
12.0	**Will the project interfere with the flow from, or otherwise impact, a dam?** If "Yes", identify the dam. (DEP Use/3140)	☐	Yes	☒	No
	12.0.1 Dam Name				
13.0	**Will the project involve operations (excluding during the construction period) that produce air emissions (i.e., NOX, VOC, etc.)?** If "Yes", identify each type of emission followed by the amount of that emission. (DEP Use/4x70)	☒	Yes	☐	No
	13.0.1 Enter all types & amounts of emissions; separate each set with semicolons. VOC – 47.5 tpy, NOx – 92.1 tpy, CO – 9.7 tpy, SO2 – 0.3 tpy, PM/PM10 – 5.7 tpy				
14.0	**Does the project include the construction or modification of a drinking water supply to serve 15 or more connections or 25 or more people, at least 60 days out of the year?** If "Yes", check all proposed sub-facilities. (DEP Use/4x81)	☐	Yes	☒	No
	14.0.1 Number of Persons Served				
	14.0.2 Number of Employee/Guests				
	14.0.3 Number of Connections				
	14.0.4 Sub-Fac: Distribution System	☐	Yes	☐	No
	14.0.5 Sub-Fac: Water Treatment Plant	☐	Yes	☐	No
	14.0.6 Sub-Fac: Source	☐	Yes	☐	No
	14.0.7 Sub-Fac: Pump Station	☐	Yes	☐	No
	14.0.8 Sub Fac: Transmission Main	☐	Yes	☐	No
	14.0.9 Sub-Fac: Storage Facility	☐	Yes	☐	No
15.0	**Will your project include infiltration of storm water or waste water to ground water within one-half mile of a public water supply well, spring or infiltration gallery?** (DEP Use/4x81) and 4x52).	☐	Yes	☒	No
16.0	**Is your project to be served by an existing public water supply?** If "Yes", indicate name of supplier and attach letter from supplier stating that it will serve the project. (DEP Use/4x81)	☐	Yes	☒	No
	16.0.1 Supplier's Name				
	16.0.2 Letter of Approval from Supplier is Attached	☐	Yes	☐	No
17.0	**Will this project involve a new or increased drinking water withdrawal from a stream or other water body?** If "Yes", should reference both Water Supply and Watershed Management. (DEP Use/4x81 and 4x10)	☐	Yes	☒	No
	17.0.1 Stream Name				
18.0	**Will the construction or operation of this project involve treatment, storage, reuse, or disposal of waste?** If "Yes", indicate what type (i.e., hazardous, municipal (including infectious & chemotherapeutic), residual) and the amount to be treated, stored, re-used or disposed. (DEP/Use4x32)	☒	Yes	☐	No
	18.0.1 Type & Amount About 28,000 gal of waste water per year				
19.0	**Will your project involve the removal of coal, minerals, etc. as part of any earth disturbance activities?** (DEP Use/48y1)	☐	Yes	☒	No
20.0	**Does your project involve installation of a field constructed underground storage tank?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570)	☐	Yes	☒	No
	20.0.1 Enter all substances & capacity of each; separate each set with semicolons.				
21.0	**Does your project involve installation of an aboveground storage tank greater than 21,000 gallons capacity at an existing facility?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570)	☐	Yes	☒	No
	21.0.1 Enter all substances & capacity of each; separate each set with semicolons.				

22.0	**Does your project involve installation of a tank greater than 1,100 gallons which will contain a highly hazardous substance as defined in DEP's Regulated Substances List, 2570-BK-DEP2724?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) **22.0.1 Enter all substances & capacity of each; separate each set with semicolons.**	☐	Yes	☒	No
23.0	**Does your project involve installation of a storage tank at a new facility with a total AST capacity greater than 21,000 gallons?** If "Yes", list each Substance & its Capacity. **Note:** Applicant may need a Storage Tank Site Specific Installation Permit. (DEP Use/2570) **23.0.1 Enter all substances & capacity of each; separate each set with semicolons.**	☐	Yes	☒	No
24.0	**Will the intended activity involve the use of a radiation source?** (DEP Use/4x90).	☐	Yes	☒	No

CERTIFICATION

I certify that I have the authority to submit this application on behalf of the applicant named herein and that the information provided in this application is true and correct to the best of my knowledge and information.

Type or Print Name Jack Walsh

Jack Walsh — COO, Compression Services — 7-28-14

Signature **Title** **Date**

2700-PM-AQ0021 Rev. 6/2004

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

Submit in Triplicate

COMBUSTION UNIT

Application for Plan Approval to Construct, Modify or Reactivate an Air Contamination Source and/or Install an Air Cleaning Device

This application and the General Information Form (GIF) must be included in the submittal

Before completing this form, read the instructions provided with this form.

Section A - Facility Name, Checklist And Certification

Organization Name or Registered Fictitious Name/Facility Name: Laser Northeast Gathering Company, LLC

DEP Client ID# (If Known): _____

Type of Review required and Fees:

Source which is not subject to NSPS, NESHAPs, MACT, NSR and PSD: ..... $_____
Source requiring approval under NSPS or NESHAPS or both: $1,700.00
Source requiring approval under NSR: ..... $_____
Source requiring the establishment of a MACT limitation: ..... $_____
Source requiring approval under PSD: ..... $_____

Applicant's Checklist

Check the following list to make sure that all the required documents are included.

- ☒ **General Information Form (GIF)**
- ☒ **Processes Plan Approval Application**
- ☐ **Compliance Review Form** or provide reference of most recently submitted compliance review form for facilities submitting on a periodic basis: Submitted with other Laser Plan Approvals 07-2011
- ☒ **Copy and Proof of County and Municipal Notifications**
- ☒ **Permit Fees**
- ☐ **Addendum A:** Source Applicable Requirements (only applicable to existing Title V facility)

Certification of Truth, Accuracy and Completeness by a Responsible Official

I, **Jack Walsh**, certify under penalty of law in 18 Pa. C. S. A. §4904, and 35 P.S. §4009(b) (2) that based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate and complete.

(Signature): Jack Walsh Date: 7.28.11

Name (Print): Jack Walsh Title: COO - Compression Services

OFFICIAL USE ONLY

Application No. _____ Unit ID _____ Site ID _____
DEP Client ID #: _____ APS. ID _____ AUTH. ID _____
Date Received _____ Date Assigned _____ Reviewed By _____
Date of 1st Technical Deficiency _____ Date of 2nd Technical Deficiency _____
Comments: _____

Section B - Combustion Unit Information

1. Combustion Units: ☐ Coal ☐ Oil ☒ Natural Gas Other: _____

Description:

The wet gas will be routed to the compressors, which will consist of four, 4,735 hp, Caterpillar 3616 engines (SC161, SC162, SC163, SC164). All four are part of Caterpillar's 3600 Series, lean-burn engines. They are the lowest NOx producing engines available and so represent Best Available Technology (BAT). The 4735-hp units are four-stroke with 16 cylinders and twin turbochargers. Each has a total displacement is 20,698 cubic inches. Emissions from the engines will include VOCs, NOx, CO and formaldehyde. All four engines will be equipped with Maxim silencers that include a platinum coated oxidation catalyst (CDX061, CX062, CX063 and CX161). The catalysts will significantly reduce CO, VOCs and formaldehyde. The engines will be located inside a purpose built compressor building.

Manufacturer	Model No.		Number of units
Caterpillar	G3616		4
Maximum heat input (Btu/hr)	Rated heat input (Btu/hr)	Typical heat input (Btu/hr)	Furnace Volume
32.41 MMBTU/Hr each	32.41 MMBTU/Hr each		
Grate Area (if applicable)		Method of firing	

Indicate how combustion air is supplied to boiler

Indicate the Steam Usage:

Mark and describe soot Cleaning Method:

i. Air Blown
ii. Steam Blown
iii. Brushed and Vacuumed
iv. Other _____
v. Frequency of Cleaning _____

Maximum Operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	7	365	8,760

Operational restrictions taken or requested, if any (e.g., bottlenecks or voluntary restrictions to limit potential to emit)

Capacity (specify units)

Per hour	Per day	Per week	Per year
4,735 HP			

Typical Operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	7	365	8,760

Seasonal variations (Months): If variations exist, describe them.

Operating using primary fuel: _____ From _____ to _____
Operating using secondary fuel: _____ Form _____ to _____
Non-operating: From _____ to _____

2. Specify the primary, secondary and startup fuel. Furnish the details in item 3.
Natural Gas

Section B - Combustion Unit Information (Continued)

3. Fuel

Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number	GPH @ 60°F	X 10^3 Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number	GPH @ 60°F	X 10^3 Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number	GPH @ 60°F	X 10^3 Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas Total of 4 Each	125,867,800SCFH 31,467 SCFH	X 10^6 Gal	0.2 gr/100 SCF		1,030 Btu/SCF
Gas (other)	SCFH	X 10^6 Gal	gr/100 SCF		Btu/SCF
Coal					
Other*					

* Note: Describe and furnish information separately for other fuels in Addendum B.

4. Burner

Manufacturer	Model Number	Type of Atomization (Steam, air, press, mech., rotary cup)

Number of Burners	Maximum fuel firing rate (all burners)	Normal fuel firing rate

If oil, temperature and viscosity.

Maximum theoretical air requirement

Percent excess air 100% rating

Turndown ratio

Combustion modulation control (on/off, low-high fire, full automatic, manual). Describe.

Main burner flame ignition method (electric spark, auto gas pilot, hand-held torch, other). Describe.

5. Nitrogen Oxides (NO_x) control Options

Mark and describe the NO_x control options adopted

Low excess air (LEA)	Flue gas recirculation	Other. Lean Burn
Over fire air (OFA)	Burner out of service	
Low-NO_x burner	Reburning	
Low NO_x burners with over fire air	Flue gas treatment (SCR / SNCR)	

Section B - Combustion Unit Information (Continued)

6. Miscellaneous Information

Describe fly ash reinjection operation

N/A

Describe, in detail, the equipment provided to monitor and to record the source(s) operating conditions, which may affect emissions of air contaminants. Show that they are reasonable and adequate.

Engine power (bhp, rpm) and natural gas firing rate (SCFH) will be monitored. Caterpillar Advanced Digital Engine Management (ADEM) System will control air fuel ratio.

Describe each proposed modification to an existing source.

N/A

Describe how emissions will be minimized especially during start up, shut down, combustion upsets and/or disruptions. Provide emission estimates for start up, shut down and upset conditions. Provide duration of start up and shut down.

ADEM system will minimize emissions. Duration of startup and shut downs are expected to be minimal. Engines will be purged for maintenance approximately 6 times a month for duration of 15 seconds per purge. Emissions are estimated in Appendix D.

Describe in detail with a schematic diagram of the control options adopted for SO_2 (if applicable).

N/A

Anticipated milestones:

Expected commencement date of construction/reconstruction:	4th Quarter 2011
Expected completion date of construction/reconstruction:	4th Quarter 2011
Anticipated date(s) of start-up:	4th Quarter 2011

Section C - Air Cleaning Device

1. Precontrol Emissions* **Total of 4 Compressor Engines**

Emission Rate

Pollutant	Maximum Emission Rate				Calculation/ Estimation Method
	Specify Units	Pounds/Hour	Hours/Year	Tons/Year	
PM			8,760	5.67	AP-42
PM_{10}			8,760	5.67	AP-42
SOx			8,760	0.33	AP-42
CO			8,760	502.94	Vendor Data
NO_x			8,760	91.43	Vendor Data
VOC			8,760	115.22	Vendor Data
Others: (e.g., HAPs)	-----	-----	-----		-----
vHAPS			8,760	2.31	AP-42
Formaldehyde			8,760	73.15	Vendor Data

* These emissions must be calculated based on the requested operating schedule and/or process rate, e.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Gas Conditioning

Water quenching ☐ YES ☐ NO Water injection rate _____GPM

Radiation and convection cooling ☐ YES ☐ NO

Air dilution ☐ YES ☐ NO
If YES, _____ CFM

Forced draft ☐ YES ☐ NO

Water cooled duct work ☐ YES ☐ NO

Other _____

Inlet volume
_____ ACFM@ _____ °F

Outlet volume
_____ ACFM@ _____ °F _____ % Moisture

Describe the system in detail.

Section C - Air Cleaning Device (Continued)

3. Inertial and Cyclone Collectors N/A

Manufacturer	Type	Model No.

Pressure Drop (in. of water)	Inlet Volume	Outlet Volume
	_____ ACFM @ _____ °F	_____ ACFM @ _____ °F _____ % Moisture

Number of Individual Cyclone(s)	Outlet Straightening Vanes Used? ☐ Yes ☐ No

Length of Cyclone(s) Cylinder (ft)	Diameter of Cyclone(s) Cylinder	Length of cyclone(s) cone (ft)

Inlet Diameter (ft) or Duct Area (ft^2) of Cyclone(s)	Outlet Diameter (ft) or Duct area (ft^2) of cyclone(s)

If a multi-clone or multi-tube unit is installed, will any of the individual cyclones or cyclone tubes be blanked or blocked off?

Describe any exhaust gas recirculation loop to be employed.

Attach particle size efficiency curve

Emission data

Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

4. Fabric Collector N/A

Equipment Specifications

Manufacturer	Model No.	☐ Pressurized Design ☐ Suction Design
Number of Compartments	Number of Filters Per Compartment	Is Baghouse Insulated? ☐ Yes ☐ No

Can each compartment be isolated for repairs and/or filter replacement? ☐ Yes ☐ No

Are temperature controls provided? (Describe in detail) ☐ Yes ☐ No

Dew point at maximum moisture _____ °F | Design inlet volume _____ SCFM

Type of Fabric

Material _____ ☐ Felted ☐ Membrane

Weight _____ oz/sq.yd ☐ Woven ☐ Others: List: _____

Thickness _____ in ☐ Felted-Woven

Fabric permeability (clean) @ ½" water-Δ P _____ CFM/sq.ft.

Filter dimensions _____ Diameter/Width _____

Effective area per filter _____ | Maximum operating temperature (°F) _____

Effective air to cloth ratio Minimum _____ Maximum _____

Drawing of Fabric Filter

A sketch of the fabric filter showing all access doors, catwalks, ladders and exhaust ductwork, location of each pressure and temperature indicator should be attached.

Operation and Cleaning

Volume of gases handled	Pressure drop across collector (in. of water). Describe the equipment to be used to monitor the pressure drop.
_____ ACFM _____ °F	

Type of filter cleaning

☐ Manual Cleaning ☐ Bag Collapse ☐ Reverse Air Jets

☐ Mechanical Shakers ☐ Sonic Cleaning ☐ Other: _____

☐ Pneumatic Shakers ☐ Reverse Air Flow

If compressed air is required for collector operation, describe the equipment with the compressor to provide dry air free from oil.

Cleaning Initiated By

☐ Timer Frequency if timer actuated _____

☐ Expected pressure drop range _____ in. of water ☐ Other Specify _____

Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If yes, describe.

Describe the warning/alarm system that protects against operation when the unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

5. Wet Collection Equipment: N/A

Equipment Specifications

Manufacturer	Type	Model No.

Design Inlet Volume (SCFM)	Relative Particulate/Gas Velocity (ejector scrubbers only)

Describe the internal features (e.g., variable throat, gas/liquid diffusion plates, spray nozzles, liquid redistributors, bed limiters, etc.).

Describe pH monitoring and pH adjustment systems, if applicable.

Describe mist eliminator or separator (type, configuration, backflush capability, frequency).

Attach particulate size efficiency curve.

Operating Parameters

Inlet volume of gases handled _____ (ACFM) @_____°F	Outlet volume of gases handled _____ (ACFM) @_____ °F _____% Moisture

Liquid flow rates. Describe equipment provided to measure liquid flow rates to scrubber (e.g., quenching section, recirculating solution, makeup water, bleed flow, etc.)

Describe scrubber liquid supply system (amount of make-up and recirculating liquid, capacity of recirculating liquid system, etc).

State pressure drop range (in water) across scrubber (e.g., venturi throat, packed bed, etc.) only. Describe the equipment provide to measure the pressure drop. Do not include duct or de-mister losses.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

6. Electrostatic Precipitator N/A

Equipment specifications

Manufacturer	Model No.	☐ Wet ☐ Dry ☐ Single-Stage ☐ Two-Stage

Gas distribution grids ☐ YES ☐ NO	Design inlet volume (SCFM) _____ Maximum operating temperature (°F) _____

Total collecting surface area _____ sq. ft. Collector plates size length _____ ft. x width _____ ft.
Number of fields _____ Number of collector plates/field _____. Spacing between collector plates _____inches.
Maximum gas velocity _____ ft/sec. Minimum gas treatment time: _____ sec.

Total discharge electrode length _____ ft.
Number of discharge electrodes _____ Number collecting electrode rappers _____

Rapper control ☐ Magnetic ☐ Pneumatic ☐ Other _____
Describe in detail

Operating parameters

Inlet gas temperature (°F) _____ Outlet gas temperature (°F) _____	State pressure drop range (water gauge) across collector only. Describe the equipment.
Volume of gas handled (ACFM) _____	Dust resistivity (ohm-cm). Will resistivity vary?

Power requirements

Number and size of Transformer Rectifier sets by electrical field

Field No.	No. of Sets	Each Transformer KVA	Each Rectifier	
			KV Ave./Peak	MaDC

Current density	Corona power	Corona power density
_____ Micro amperes/ft^2	_____ Watts/1000 ACFM	_____ Watts/ft^2

Will a flue gas conditioning system be employed? If yes, describe it.

Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If yes, describe.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

7. Absorption Equipment: N/A

Equipment specifications

Manufacturer	Type	Model No

Design inlet volume (SCFM)	Tower height (ft) and inside diameter (ft)
Packing type and size (if applicable)	Height of packing (ft) (if applicable)
Number of trays (if applicable)	Number of bubble caps (if applicable)

Configuration: ☐ Counter-current ☐ Cross flow ☐ Cocurrent flow

Describe pH and/or other monitoring and controls

Absorbent information

Absorbent type and concentration	Sorbent injection rate	Retention time (sec)

Attach equilibrium data for absorption (If applicable).

Attach any additional information regarding auxiliary equipment, reagent (slurry mix) supply system (once through or recirculating, system capacity, etc) to thoroughly evaluate the control equipment. Indicate the flow rates for makeup, bleed and recirculation.

Operating parameters

Volume of gas handled (ACFM)	Inlet temperature (°F)	Pressure drop (in of water) and liquid flow rate. Describe the equipment.

State operating range for pH and/or absorbent concentration in scrubber liquid.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

8. ☐ SELECTIVE CATALYTIC REDUCTION (SCR)
   ☐ SELECTIVE NON-CATALYTIC REDUCTION (SNCR)
   ☒ NON-SELECTIVE CATALYTIC REDUCTION (NSCR)

Equipment specifications

Manufacturer	Type	Model No
Maxim Silencers		MCCOS-1200

Design inlet volume (SCFM)	Design operating temperature (°F)
32,100	752

Is the system equipped with process controls for proper mixing/control of the reducing agent in gas stream? If yes, give details.
N/A

Attach efficiency and other pertinent information (e.g., Ammonia, urea slip).
CO – 98.3%, VOC – 69.0%, Formaldehyde – 98.6%

Operating parameters

Volume of gases handled (ACFM) 32,100 @ 752 (°F)

Operating temperature range for the SCR/SNCR/NSCR system (°F)	From	To
	750	950

Reducing agent used, if any.	Oxidation catalyst used, if any.
N/A	Oxidation

State expected range of usage rate and concentration.
N/A

Service life of catalyst	Ammonia slip (ppm)
	N/A

Describe fully with a sketch giving locations of equipment, controls system, important parameters and method of operation.
Catalyst inlet and outlet temperatures will be monitored.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions data

Pollutant	Inlet	Outlet	Removal Efficiency (%)
CO	2.75	0.05	98.3
VOC	0.63	0.20	69.0
Formaldehyde	0.4	0.0056	98.6

Section C - Air Cleaning Device (Continued)

9. Other Control Equipment: N/A

Equipment specifications

Manufacturer	Type	Model No

Design inlet volume (SCFM)	Capacity

Describe pH monitoring and pH adjustment, if any.

Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.

Attach efficiency curve and/ or other efficiency information.

Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.

Operating parameters

Volume of gas handled

_____ @ _____ °F _____ % Moisture

Describe, in detail, important parameters and method of operation.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

10. Costs N/A

Indicate cost associated with air cleaning device and its operating cost (attach documentation if necessary)

Device	Direct Cost	Indirect Cost	Total Cost	Operating Cost

11 MISCELLANEOUS

Describe in detail the removal, handling and disposal of dust, effluent, etc. from the air cleaning device including proposed methods of controlling fugitive emissions.

N/A

Attach manufacturer's performance guarantees and/or warranties for each of the major components of the control system (or complete system).

See Appendix C.

Attach the maintenance schedule for the control equipment and any part of the process equipment that, if in disrepair, would increase air contaminant emissions.

Section D - Additional Information

Will the construction, modification, etc. of the sources covered by this application increase emissions from other sources at the facility? If so, describe and quantify.

No

If this project is subject to any one of the following, attach a demonstration to show compliance with applicable standards

a. Prevention of Significant Deterioration permit (PSD), 40 CFR Part 52? ☐ YES ☒ NO

b. New Source Review, 25 Pa. Code Chapter 127, Subchapter E? ☐ YES ☒ NO

c. New Source Performance Standards, 40 CFR Part 60? ☒ YES ☐ NO
(If Yes, which subpart) JJJJ

d. National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61? ☒ YES ☐ NO
If Yes, which subpart) ZZZZ

e. Maximum Achievable Control Technology (MACT), 40 CFR Part 63? ☐ YES ☒ NO
(If Yes, which subpart) _____

Attach a demonstration showing that the emissions from any new source will be the minimum attainable through the use of best available technology (BAT).

See Section 5 of text.

Provide emission increases and decreases in allowable (or potential) and actual emissions within the last 5 years for applicable PSD pollutant(s) if the facility is an existing major facility (for PSD purposes)

N/A

Section D - Additional Information (Continued)

Indicate emission increases and decreases in tons per year (tpy), for volatile organic compounds (VOCs) and nitrogen oxides (NOx) for NSR applicability since January 1, 1991 or other applicable dates (See other applicable date in instructions). The emissions increases include all emissions including stack, fugitive, material transfer, other emission generating activities, quantifiable emissions from the exempted source(s), etc. **N/A**

Permit number (if applicable)	Date issued	Indicate ***Yes*** or ***No*** if emission increases and decreases were used previously for netting	Source I.D. or Name	VOCs		NOx	
				Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)

If the source is subject to 25 Pa. Code Chapter 127, Subchapter E, New Source Review requirements,

a. Identify Emission Reduction Credits (ERCs) for emission offsets or demonstrate ability to obtain suitable ERCs for emission offsets.

b. Provide a demonstration that the lowest achievable emission rate (LAER) control techniques will be implemented (if applicable).

c. Provide an analysis of alternate sites, sizes, production processes and environmental control techniques demonstrating that the benefits of the proposed source outweigh the environmental and social costs (if applicable).

Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of 25 Pa. Code Article III and applicable requirements of the Clean Air Act and regulations adopted there under. The Department may request additional information to evaluate the application such as a stand by plan, a plan for air pollution emergencies, air quality modeling, etc.

See Section 4 of text.

Section E - Compliance Demonstration

Note: Complete this section if the facility is not a Title V facility. Title V facilities must complete Addendum A.

Method of Compliance Type: Check all that apply and complete all appropriate sections below.

☒ Monitoring ☐ Testing ☐ Reporting
☒ Recordkeeping ☐ Work Practice Standard

Monitoring:

a. Monitoring device type (stack test, CEM etc.): gas meters, thermocouples

b. Monitoring device location: gas train to engines, catalyst inlet and outlet

c. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter: Gas combusted will be monitored continuously and catalyst temperatures will be recorded.

Testing:

a. Reference Test Method Citation:

b. Reference Test Method Description:

Recordkeeping:

Describe the parameters that will be recorded and the recording frequency:

Gas combusted will be recorded daily.

Catalyst temperatures will be recorded daily.

Reporting:

a. Describe the type of information to be reported and the reporting frequency:

b. Reporting start date:

Work Practice Standard: Describe each

Section F - Flue and Air Contaminant Emission

1. Estimated Maximum Emissions* Total of 4 Compressor Engines

Pollutant	Maximum emission rate			Calculation/ Estimation Method
	specify units	lbs/hr	tons/yr.	
PM		1.295	5.67	AP-42
PM_{10}		1.295	5.67	AP-42
SO_x		0.076	0.33	AP-42
CO		2.088	9.144	Vendor Data
NO_x		20.877	91.44	Vendor Data
VOC		8.351	36.58	Vendor Data
Others: (e.g., HAPs)	-----	----	-----	----
vHAPs		0.528	2.31	AP-42
Formaldehyde		0.234	1..02	Vendor Data

* These emissions must be calculated based on the requested operating schedule and/or process rate e.g., operating schedule for maximum limits or restricted hours of operation and /or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Stack and Exhauster

Stack Designation/Number

List Source(s) or source ID exhausted to this stack:
Compressor Engine Stack

% of flow exhausted to stack:

Stack height above grade (ft.) 25
Grade elevation (ft.) 1530

Stack diameter (ft) or Outlet duct area (sq. ft.)
1.5

Weather Cap
☐ YES ☒ NO

Distance of discharge to nearest property line (ft.). Locate on topographic map.
To be determined

Does stack height meet Good Engineering Practice (GEP)?

If modeling (estimating) of ambient air quality impacts is needed, attach a site plan with buildings and their dimensions and other obstructions. N/A

Location of Stack** Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

Stack Exhaust

Volume 32,100 ACFM Temperature 847 °F Moisture _____ %

Exhauster (attach fan curves) _____ in. of water _____ HP @ _____ RPM.

** If the datum and collection method information and codes differ from those provided on the General Information Form - Authorization Application, provide the additional required by that form on a separate sheet.

Section G - Attachments

Number and list all attachments submitted with this application below:

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

Instructions for Completing a Plan Approval Application

- See the detailed instruction package available for plan approval applications.
- Use only the pages for the air cleaning devices that pertain to this project and remove the remaining pages.
- If there is more than one air cleaning device of the same type, copy the page for air cleaning devices and provide the appropriate information for each device.
- If the proposed source is connected to more than one stack and exhauster, copy the page for the stack and exhauster and provide the appropriate information for each stack and exhauster.
- Use additional sheets of paper, if the space provided is not sufficient to provide detailed information required for review and approval.
- Information may be grouped into a single attachment for each section or air cleaning device.
- Number all pages of the application (Sections A through G) accordingly.
- Attach any and all information for source and air cleaning device(s) for a thorough evaluation of the extent and nature of emissions.
- Identify, number and list all attachments made to this application (e.g., Attachment #1-Section A).
- Submit three (3) sets of the completed application with all attachments to the appropriate Regional Office.

2700-PM-AQ0007 Rev. 7/2004

Submit in Triplicate

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

PROCESSES

Application for Plan Approval to Construct, Modify or Reactivate an Air Contamination Source and/or Install an Air Cleaning Device

This application must be submitted with the General Information Form (GIF).

Before completing this form, read the instructions provided for the form.

Section A - Facility Name, Checklist And Certification

Organization Name or Registered Fictitious Name/Facility Name: Laser Northeast Gathering Company, LLC

DEP Client ID# (if known): _____

Type of Review required and Fees:

- ☐ Source which is not subject to NSPS, NESHAPs, MACT, NSR and PSD: ..... $_____
- ☒ Source requiring approval under NSPS or NESHAPS or both: $1,700.00
- ☐ Source requiring approval under NSR regulations: ..... $_____
- ☐ Source requiring the establishment of a MACT limitation: ..... $_____
- ☐ Source requiring approval under PSD: ..... $_____

Applicant's Checklist

Check the following list to make sure that all the required documents are included.

- ☒ **General Information Form (GIF)**
- ☒ **Processes Plan Approval Application**
- ☐ **Compliance Review Form** or provide reference of most recently submitted compliance review form for facilities submitting on a periodic basis: Submitted with other Laser Plan Approvals 07-2011
- ☒ **Copy and Proof of County and Municipal Notifications**
- ☒ **Permit Fees**
- ☐ **Addendum A:** Source Applicable Requirements (only applicable to existing Title V facility)

Certification of Truth, Accuracy and Completeness by a Responsible Official

I, **Jack Walsh**, certify under penalty of law in 18 Pa. C. S. A. §4904, and 35 P.S. §4009(b) (2) that based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate and complete.

(Signature): Jack Walsh Date: 7-28-11

Name (Print): Jack Walsh Title: COO – Compressor Services

OFFICIAL USE ONLY

Application No. _____ Unit ID _____ Site ID _____

DEP Client ID #: _____ APS. ID _____ AUTH. ID _____

Date Received _____ Date Assigned _____ Reviewed By _____

Date of 1st Technical Deficiency _____ Date of 2nd Technical Deficiency _____

Comments: _____

Section B - Processes Information

1. Source Information

Source Description (give type, use, raw materials, product, etc). Attach additional sheets as necessary.

Natural Gas Dehyrators (3 total) and ancillary equipment - Figure 2-1 provides a schematic showing the components of the gas dehydration system. The compressed wet gas will enter the TEG (triethylene glycol) dehydrator column, where the gas will pass in the opposite direction to the lean TEG. Any water in the gas is more attracted to the TEG than the gas and so it moves into the TEG, resulting in rich TEG. The dry gas will be routed to the compressors. The rich TEG is heated by the reboiler 0.5 MMBTU/Hr gas fired unit (3 total) and, because the boiling point of water is much lower than that for TEG, the water is removed from the TEG as steam, which is routed to the still vent.

Manufacturer	Model No.	Number of Sources 3 Dehydrator Systems
Source Designation TEG Dehydrators (3 total systems)	Maximum Capacity 240 MMSCF/D (80 MMSCF/D each)	Rated Capacity 240 MMSCF/D (80 MMSCF/D each)

Type of Material Processed
Natural Gas

Maximum Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	7	365	8760

Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per Hour	Per Day	Per Week	Per Year
6.25 MMSCF	150 MMSCF	1,050 MMSCF	54,750

Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	7	365	8760

Seasonal variations (Months) From to

If variations exist, describe them

2. Fuel

Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number _____	GPH @ 60°F	X 10^3 Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number _____	GPH @ 60°F	X 10^3 Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas (Per Reboiler) (3 Reboilers Tot)	493 SCFH 1,479 SCFH	4.32 X 10^6 SCF 13.0 X 10^6 SCF	0.2 grain/100 SCF		1,030 Btu/SCF
Gas (other) _____	SCFH	X 10^6 SCF	grain/100 SCF		Btu/SCF
Coal	TPH	Tons	% by wt		Btu/lb
Other *					

*Note: Describe and furnish information separately for other fuels in Addendum B.

Section B - Processes Information (Continued)

3. Burner

Manufacturer	Type and Model No.	Number of Burners

Description:
Reboilers (3 total)

Rated Capacity	Maximum Capacity
0.5 MMBTU/Hr (each)	0.5 MMBTU/Hr (each)

4. Process Storage Vessels

A. For Liquids: See Attached List in Table 1 of Text

Name of material stored

Tank I.D. No.	Manufacturer	Date Installed

Maximum Pressure	Capacity (gallons/Meter^3)

Type of relief device (pressure set vent/conservation vent/emergency vent/open vent)

Relief valve/vent set pressure (psig)	Vapor press. of liquid at storage temp. (psia/kPa)

Type of Roof: Describe:

Total Throughput Per Year	Number of fills per day (fill/day): Filling Rate (gal./min.): Duration of fill hr./fill):

B. For Solids N/A

Type: ☐ Silo ☐ Storage Bin ☐ Other, Describe	Name of Material Stored

Silo/Storage Bin I.D. No.	Manufacturer	Date Installed

State whether the material will be stored in loose or bags in silos	Capacity (Tons)

Turn over per year in tons	Turn over per day in tons

Describe fugitive dust control system for loading and handling operations

Describe material handling system

5. Request for Confidentiality

Do you request any information on this application to be treated as "Confidential"? ☐ Yes ☐ No
If yes, include justification for confidentiality. Place such information on separate pages marked **"confidential"**.

Section B - Processes Information (Continued)

6. Miscellaneous Information

Attach flow diagram of process giving all (gaseous, liquid and solid) flow rates. Also, list all raw materials charged to process equipment, and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum and average charges describing fully expected variations in production rates). Indicate (on diagram) all points where contaminants are controlled (location of water sprays, collection hoods, or other pickup points, etc.). Describe collection hoods location, design, airflow and capture efficiency. Describe any restriction requested and how it will be monitored.

See Attached Figure 2-1

The compressed wet gas will enter the TEG (triethylene glycol) dehydrator column, where the gas will pass in the opposite direction to the lean TEG. Any water in the gas is more attracted to the TEG than the gas and so it moves into the TEG, resulting in rich TEG. The dry gas will be routed to the compressors. The rich TEG is heated by the reboiler 0.5 MMBTU/Hr gas fired unit) and, because the boiling point of water is much lower than that for TEG, the water is removed from the TEG as steam, which is routed to the still vent.

Describe fully the facilities provided to monitor and to record process operating conditions, which may affect the emission of air contaminants. Show that they are reasonable and adequate.

The lean TEG is returned to the dehydrator for reuse. Because of the significant differences in the boiling points of water (210 °F) and TEG (545 °F) no TEG is vaporized in the regeneration process and all the TEG is returned to the system. Consequently there are no emissions of TEG. Not only does the water prefer to be in the TEG, but Hazardous Air Pollutants (HAPs) that may be components of most natural gas also move to the TEG in the process.

Describe each proposed modification to an existing source.

N/A

Identify and describe all fugitive emission points, all relief and emergency valves and any by-pass stacks.

See the fugitive emissions estimates for pumps, valves and components in Appendix D of the text.

Describe how emissions will be minimized especially during start up, shut down, process upsets and/or disruptions.

Operating procedures will be maintained such that emissions during start up, shut down, process upsets and / or disruptions will be minimized.

Anticipated Milestones:

i. Expected commencement date of construction/reconstruction/installation: 4th Quarter 2011
ii. Expected completion date of construction/reconstruction/installation: 4th Quarter 2011
iii. Anticipated date of start-up: 4th Quarter 2011

Section C - Air Cleaning Device

1. Precontrol Emissions*

Pollutant	Maximum Emission Rate				Calculation/ Estimation Method
	Specify Units	Pounds/Hour	Hours/Year	Tons/Year	
PM			8,760	0.05	AP-42
PM_{10}			8,760	0.05	AP-42
SO_x			8,760	0.004	AP-42
CO			8,760	0.54	AP-42
NO_x			8,760	0.65	AP-42
VOC			8,760	10.83	GLYCalc, TANKS
Others: (e.g., HAPs)	-----	-----	-----	-----	-----
vHAPs			8,760	0.01	AP-42

* These emissions must be calculated based on the requested operating schedule and/or process rate, e.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Gas Cooling

Water quenching ☐ Yes ☐ No Water injection rate _____ GPM

Radiation and convection cooling ☐ Yes ☐ No	Air dilution ☐ Yes ☐ No If yes, _____CFM
Forced Draft ☐ Yes ☐ No	Water cooled duct work ☐ Yes ☐ No
Other	
Inlet Volume _____ACFM @ _____°F _____% Moisture	Outlet Volume _____ACFM @ _____°F _____% Moisture

Describe the system in detail.

Section C - Air Cleaning Device (Continued)

3. Settling Chambers N/A

Manufacturer	Volume of gas handled _____ACFM @ _____°F	Gas velocity (ft/sec.)

Length of chamber (ft.)	Width of chamber (ft.)	Height of chamber (ft.)	Number of trays

Water injection ☐ Yes ☐ No	Water injection rate (GPM)

Emissions Data

Inlet	Outlet	Removal Efficiency (%)

4. Inertial and Cyclone Collectors N/A

Manufacturer	Type	Model No.

Pressure drop (in. of water)	Inlet volume _____ACFM @ _____°F	Outlet volume _____ACFM @ _____°F

Number of individual cyclone(s)	Outlet straightening vanes used? ☐ Yes ☐ No

Length of Cyclone(s) Cylinder (ft.)	Diameter of Cyclone(s) Cylinder (ft.)	Length of Cyclone(s) cone (ft.)

Inlet Diameter (ft.) or duct area ($ft.^2$) of cyclone(s)	Outlet Diameter (ft.) or duct area ($ft.^2$) of cyclone(s)

If a multi-clone or multi-tube unit is installed, will any of the individual cyclones or cyclone tubes be blanked or blocked off?

Describe any exhaust gas recirculation loop to be employed.

Attach particle size efficiency curve

Emissions Data

Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

5. Fabric Collector N/A

Equipment Specifications

Manufacturer	Model No.	☐ Pressurized Design ☐ Suction Design
Number of Compartments	Number of Filters Per Compartment	Is Baghouse Insulated? ☐ Yes ☐ No
Can each compartment be isolated for repairs and/or filter replacement?		☐ Yes ☐ No
Are temperature controls provided? (Describe in detail)		☐ Yes ☐ No
Dew point at maximum moisture _____ °F	Design inlet volume _____ SCFM	

Type of Fabric

Material _____ ☐ Felted ☐ Membrane

Weight _____ oz/sq.yd ☐ Woven ☐ Others: List: _____

Thickness _____ in ☐ Felted-Woven

Fabric permeability (clean) @ ½" water-Δ P _____ CFM/sq.ft.

Filter dimensions Length _____ Diameter/Width _____

Effective area per filter _____ Maximum operating temperature (°F) _____

Effective air to cloth ratio Minimum _____ Maximum _____

Drawing of Fabric Filter

A sketch of the fabric filter showing all access doors, catwalks, ladders and exhaust ductwork, location of each pressure and temperature indicator should be attached.

Operation and Cleaning

Volume of gases handled

_____ ACFM @ _____ °F

Pressure drop across collector (in. of water).
Describe the equipment to be used to monitor the pressure drop.

Type of filter cleaning

☐ Manual Cleaning ☐ Bag Collapse ☐ Reverse Air Jets

☐ Mechanical Shakers ☐ Sonic Cleaning ☐ Other: _____

☐ Pneumatic Shakers ☐ Reverse Air Flow

Describe the equipment provided if dry oil free air is required for collector operation

Cleaning Initiated By

☐ Timer Frequency if timer actuated _____

☐ Expected pressure drop range _____ in. of water ☐ Other Specify _____

Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If yes, describe.

Describe the warning/alarm system that protects against operation when the unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

6. Wet Collection Equipment N/A

Equipment Specifications

Manufacturer	Type	Model No.

Design Inlet Volume (SCFM)	Relative Particulate/Gas Velocity (ejector scrubbers only)

Describe the internal features (e.g., variable throat, gas/liquid diffusion plates, spray nozzles, liquid redistributors, bed limiters, etc.).

Describe pH monitoring and pH adjustment systems, if applicable.

Describe mist eliminator or separator (type, configuration, backflush capability, frequency).

Attach particulate size efficiency curve.

Operating Parameters

Inlet volume of gases handled _____ (ACFM) @ _____ °F	Outlet volume of gases handled _____ (ACFM) @ _____ °F _____% Moisture

Liquid flow rates. Describe equipment provided to measure liquid flow rates to scrubber (e.g., quenching section, recirculating solution, makeup water, bleed flow, etc.)

Describe scrubber liquid supply system (amount of make-up and recirculating liquid, capacity of recirculating liquid system, etc.)

State pressure drop range (in water) across scrubber (e.g., venturi throat, packed bed, etc.) only. Describe the equipment provide to measure the pressure drop. Do not include duct or de-mister losses.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

7. Electrostatic Precipitator N/A

Equipment Specifications

Manufacturer	Model No.	☐ Wet ☐ Dry ☐ Single-Stage ☐ Two-Stage

Gas distribution grids ☐ Yes ☐ No

Design Inlet Volume (SCFM) _____

Maximum operating temperature (°F) _____

Total collecting surface area _____ sq. ft. Collector plates size length _____ ft. x width _____ ft.

Number of fields _____ Number of collector plates/field _____

Spacing between collector plates _____ inches.

Maximum gas velocity _____ ft./sec. Minimum gas treatment time: _____ sec.

Total discharge electrode length _____ ft.

Number of discharge electrodes _____ Number of collecting electrode rappers _____

Rapper control ☐ Magnetic ☐ Pneumatic ☐ Other _____ Describe in detail

Operating Parameters

Inlet gas temperature (°F) _____

Outlet gas temperature (°F) _____

State pressure drop range (inches water gauge) across collector only _____

Describe the equipment

Volume of gas handled (ACFM) _____

Dust resistivity (ohm-cm). Will resistivity vary?

Power requirements

Number and size of Transformer Rectifier sets by electrical field

Field No.	No. of Sets	Each Transformer KVA	Each Rectifier KV Ave./Peak	Ma DC

Current Density _____ Micro amperes/ft^2.

Corona Power _____ Watts/1000 ACFM

Corona Power Density _____ Watts/ft^2.

Will a flue gas conditioning system be employed? If yes, describe it.

Does air cleaning device employ hopper heaters, hopper vibrators or hopper level detectors? If yes, describe.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

8. Adsorption Equipment N/A

Equipment Specifications

Manufacturer	Type	Model No.

Design Inlet Volume (SCFM)	Adsorbent charge per adsorber vessel and number of adsorber vessels

Length of Mass Transfer Zone (MTZ), supplied by the manufacturer based upon laboratory data.

Adsorber diameter (ft.) and area ft^2.)	Adsorption bed depth (ft.)

Adsorbent information

Adsorbent type and physical properties.

Working capacity of adsorbent (%)	Heel percent or unrecoverable solvent weight % in the adsorbent after regeneration.

Operating Parameters

Inlet volume of gases handled _____ (ACFM) @ _____ °F

Adsorption time per adsorption bed	Breakthrough capacity: Lbs. of solvent / 100 lbs. of adsorbent = _____

Vapor pressure of solvents at the inlet temperature	Available steam in pounds to regenerate carbon adsorber (if applicable)

Percent relative saturation of each solvent at the inlet temperature

Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

9. Absorption Equipment N/A

Equipment Specifications

Manufacturer	Type	Model No.

Design Inlet Volume (SCFM)	Tower height (ft.) and inside diameter (ft.)
Packing type and size (if applicable)	Height of packing (ft.) (if applicable)
Number of trays (if applicable)	Number of bubble caps (if applicable)

Configuration

☐ Counter-current ☐ Cross flow ☐ Cocurrent flow

Describe pH and/or other monitoring and controls.

Absorbent information

Absorbent type and concentration.	Retention time (sec.)
Attach equilibrium data for absorption (if applicable)	

Attach any additional information regarding auxiliary equipment, absorption solution supply system (once through or recirculating, system capacity, etc.) to thoroughly evaluate the control equipment. Indicate the flow rates for makeup, bleed and recirculation.

Operating Parameters

Volume of gas handled (ACFM)	Inlet temperature (°F)	Pressure drop (in. of water) and liquid flow rate. Describe the monitoring equipment.

State operating range for pH and/or absorbent concentration in scrubber liquid.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

10. ☐ Selective Catalytic Reduction (SCR)
☐ Selective Non-Catalytic Reduction (SNCR) N/A
☐ Non-Selective Catalytic Reduction (NSCR)

Equipment Specifications

Manufacturer	Type	Model No.

Design Inlet Volume (SCFM)	Design operating temperature (°F)

Is the system equipped with process controls for proper mixing/control of the reducing agent in gas stream? If yes, give details.

Attach efficiency and other pertinent information (e.g., ammonia slip)

Operating Parameters

Volume of gases handled _____ (ACFM) @ _____ °F

Operating temperature range for the SCR/SNCR/NSCR system (°F) From _____°F To _____°F

Reducing agent used, if any	Oxidation catalyst used, if any

State expected range of usage rate and concentration.

Service life of catalyst	Ammonia slip (ppm)

Describe fully with a sketch giving locations of equipment, controls systems, important parameters and method of operation.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

11. Oxidizer/Afterburners N/A

Equipment Specifications

Manufacturer	Type ☐ Thermal ☐ Catalytic	Model No.
Design Inlet Volume (SCFM)	Combustion chamber dimensions (length, cross-sectional area, effective chamber volume, etc.)	

Describe design features, which will ensure mixing in combustion chamber.

Describe method of preheating incoming gases (if applicable).	Describe heat exchanger system used for heat recovery (if applicable).

Catalyst used	Life of catalyst	Expected temperature rise across catalyst (°F)	Dimensions of bed (in inches). Height: _____ Diameter or Width: _____ Depth: _____

Are temperature sensing devices being provided to measure the temperature rise across the catalyst? ☐ Yes ☐ No
If yes, describe.

Describe any temperature sensing and/or recording devices (including specific location of temperature probe in a drawing or sketch.

Burner Information

Burner Manufacturer	Model No.	Fuel Used
Number and capacity of burners	Rated capacity (each)	Maximum capacity (each)

Describe the operation of the burner	Attach dimensioned diagram of afterburner

Operating Parameters

Inlet flow rate (ACFM) _____ @ _____°F	Outlet flow rate (ACFM) _____ @ _____°F
State pressure drop range across catalytic bed (in. of water).	Describe the method adopted for regeneration or disposal of the used catalyst.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

12. Flares N/A

Equipment Specifications

Manufacturer	Type ☐ Elevated flare ☐ Ground flare ☐ Other _____ Describe	Model No.
Design Volume (SCFM)	Dimensions of stack (ft.) Diameter _____ Height _____	
Residence time (sec.) and outlet temperature (°F)	Turn down ratio	Burner details

Describe the flare design (air/steam-assisted or nonassisted), essential auxiliaries including pilot flame monitor of proposed flare with a sketch.

Describe the operation of the flare's ignition system.

Describe the provisions to introduce auxiliary fuel to the flare.

Operation Parameters

Detailed composition of the waste gas	Heat content	Exit velocity
Maximum and average gas flow burned (ACFM)	Operating temperature (°F)	

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

13. Other Control Equipment N/A

Equipment Specifications

Manufacturer	Type	Model No.

Design Volume (SCFM)	Capacity

Describe pH monitoring and pH adjustment, if any.

Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any.

Attach efficiency curve and/or other efficiency information.

Attach any additional date including auxiliary equipment and operation details to thoroughly evaluate the control equipment.

Operation Parameters

Volume of gas handled

_____ ACFM @ _____ °F _____ % Moisture

Describe fully giving important parameters and method of operation.

Describe the warning/alarm system that protects against operation when unit is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal Efficiency (%)

Section C - Air Cleaning Device (Continued)

14. Costs N/A

Indicate cost associated with air cleaning device and its operating cost (attach documentation if necessary)

Device	Direct Cost	Indirect Cost	Total Cost	Annual Operating Cost

15. Miscellaneous

Describe in detail the removal, handling and disposal of dust, effluent, etc. from the air cleaning device including proposed methods of controlling fugitive emissions.

N/A

Attach manufacturer's performance guarantees and/or warranties for each of the major components of the control system (or complete system).

N/A

Attach the maintenance schedule for the control equipment and any part of the process equipment that if in disrepair would increase air contaminant emissions.

N/A

Section D - Additional Information

Will the construction, modification, etc. of the sources covered by this application increase emissions from other sources at the facility? If so, describe and quantify.

No

If this project is subject to any one of the following, attach a demonstration to show compliance with applicable standards.

a. Prevention of Significant Deterioration permit (PSD), 40 CFR 52?	☐ YES	☒ NO
b. New Source Review (NSR), 25 Pa. Code Chapter 127, Subchapter E?	☐ YES	☒ NO
c. New Source Performance Standards (NSPS), 40 CFR Part 60? (If Yes, which subpart) _____	☐ YES	☒ NO
d. National Emissions Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61? (If Yes, which subpart) _____	☐ YES	☒ NO
e. Maximum Achievable Control Technology (MACT) 40 CFR Part 63? (If Yes, which part) _____	☐ YES	☒ NO

Attach a demonstration showing that the emissions from any new sources will be the minimum attainable through the use of best available technology (BAT).

Emission rates are relatively small. Dehydrators are used to process gas prior to compressor engines and to remove contaminants prior to combustion.

Provide emission increases and decreases in allowable (or potential) and actual emissions within the last five (5) years for applicable PSD pollutant(s) if the facility is an existing major facility (PSD purposes).

N/A

Section D - Additional Information (Continued)

Indicate emission increases and decreases in tons per year (tpy), for volatile organic compounds (VOCs) and nitrogen oxides (NOx) for NSR applicability since January 1, 1991 or other applicable dates (see other applicable dates in instructions). The emissions increases include all emissions including stack, fugitive, material transfer, other emission generating activities, quantifiable emissions from exempted source(s), etc. **N/A**

Permit number (if applicable)	Date issued	Indicate ***Yes*** or ***No*** if emission increases and decreases were used previously for netting	Source I. D. or Name	VOCs		NOx	
				Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)

If the source is subject to 25 Pa. Code Chapter 127, Subchapter E, New Source Review requirements,

a. Identify Emission Reduction Credits (ERCs) for emission offsets or demonstrate ability to obtain suitable ERCs for emission offsets.

b. Provide a demonstration that the lowest achievable emission rate (LAER) control techniques will be employed (if applicable).

c. Provide an analysis of alternate sites, sizes, production processes and environmental control techniques demonstrating that the benefits of the proposed source outweigh the environmental and social costs (if applicable).

Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of Article III and applicable requirements of the Clean Air Act adopted thereunder The Department may request additional information to evaluate the application such as a standby plan, a plan for air pollution emergencies, air quality modeling, etc.

Section E - Compliance Demonstration

Note: Complete this section if source is not a Title V facility. Title V facilities must complete Addendum A.

Method of Compliance Type: Check all that apply and complete all appropriate sections below

☒ Monitoring ☐ Testing ☐ Reporting

☒ Recordkeeping ☐ Work Practice Standard

Monitoring:

a. Monitoring device type (Parameter, CEM, etc): Thermocouples

b. Monitoring device location: Dehydrator towers

c. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter:
TEG temperature

Testing:

a. Reference Test Method: Citation

b. Reference Test Method: Description

Recordkeeping:

Describe what parameters will be recorded and the recording frequency:
Gas throughput rates recorded daily.

Reporting:

a. Describe what is to be reported and frequency of reporting:

b. Reporting start date: _____

Work Practice Standard:

Describe each:

Section F - Flue and Air Contaminant Emission

1. Estimated Atmospheric Emissions*

Pollutant	Maximum emission rate			Calculation/ Estimation Method
	specify units	lbs/hr	tons/yr.	
PM		0.004	0.05	AP-42
PM_{10}		0.004	0.05	AP-42
SO_x		0.0003	0.004	AP-42
CO		0.04	0.54	AP-42
NO_x		0.05	0.65	AP-42
VOC		2.23	10.83	GLYCalc, TANKS
Others: (e.g., HAPs)	-----	-----	-----	-----
vHAPs		0.001	0.01	AP-42

* These emissions must be calculated based on the requested operating schedule and/or process rate e.g., operating schedule for maximum limits or restricted hours of operation and /or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Stack and Exhauster

Stack Designation/Number

List Source(s) or source ID exhausted to this stack:
Dehydrator Still Vent

% of flow exhausted to stack:

Stack height above grade (ft.) 17
Grade elevation (ft.) 1530

Stack diameter (ft) or Outlet duct area (sq. ft.)
1

f. Weather Cap ☐ YES ☐ NO

Distance of discharge to nearest property line (ft.). Locate on topographic map.

Does stack height meet Good Engineering Practice (GEP)?

If modeling (estimating) of ambient air quality impacts is needed, attach a site plan with buildings and their dimensions and other obstructions.

Location of stack** Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

Stack exhaust
Volume _____ ACFM Temperature 212 °F Moisture _____ %

Indicate on an attached sheet the location of sampling ports with respect to exhaust fan, breeching, etc. Give all necessary dimensions.

Exhauster (attach fan curves) _____ in. of water _____ HP @ _____RPM.

** If the data and collection method codes differ from those provided on the General Information Form-Authorization Application, provide the additional detail required by that form on a separate form.

Section G - Attachments
Number and list all attachments submitted with this application below:

2700-PM-AQ0004 Rev. 6/2006

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

Air Quality
County: _____
JUN 24 2011
Facility Permit: _____

AIR POLLUTION CONTROL ACT COMPLIANCE REVIEW FORM

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

Type of Compliance Review Form Submittal (check all that apply)

☒ Original Filing
☐ Amended Filing

Date of Last Compliance Review Form Filing: __/__/____

Type of Submittal

☒ New Plan Approval ☐ New Operating Permit ☐ Renewal of Operating Permit
☐ Extension of Plan Approval ☐ Change of Ownership ☐ Periodic Submission (@ 6 mos)
☐ Other: _____

SECTION A. GENERAL APPLICATION INFORMATION

Name of Applicant/Permittee/("applicant")
(non-corporations-attach documentation of legal name)
Laser Northeast Gathering Company, LLC

Address 1212 S. Abington Road
Clarks Summit, PA 18411

Telephone (570) 319-1800 Taxpayer ID# 27-1124915

Permit, Plan Approval or Application ID#

Identify the form of management under which the applicant conducts its business (check appropriate box)

☐ Individual ☐ Syndicate ☐ Government Agency
☐ Municipality ☐ Municipal Authority ☐ Joint Venture
☐ Proprietorship ☐ Fictitious Name ☐ Association
☐ Public Corporation ☐ Partnership ☒ Other Type of Business, specify below:
☐ Private Corporation ☐ Limited Partnership Limited Liability Company

Describe below the type(s) of business activities performed.

Natural Gas gathering, compression, dehydration, metering and delivery into third-party interstate (and possibly intrastate) pipelines.

SECTION B. GENERAL INFORMATION REGARDING "APPLICANT"

If applicant is a corporation or a division or other unit of a corporation, provide the names, principal places of business, state of incorporation, and taxpayer ID numbers of all domestic and foreign parent corporations (including the ultimate parent corporation), and all domestic and foreign subsidiary corporations of the ultimate parent corporation with operations in Pennsylvania. Please include all corporate divisions or units, (whether incorporated or unincorporated) and privately held corporations. (A diagram of corporate relationships may be provided to illustrate corporate relationships.) Attach additional sheets as necessary.

Unit Name	Principal Places of Business	State of Incorporation	Taxpayer ID	Relationship to Applicant
N/A				

SECTION C. SPECIFIC INFORMATION REGARDING APPLICANT AND ITS "RELATED PARTIES"

Pennsylvania Facilities. List the name and location (mailing address, municipality, county), telephone number, and relationship to applicant (parent, subsidiary or general partner) of applicant and all Related Parties' places of business, and facilities in Pennsylvania. Attach additional sheets as necessary.

Unit Name	Street Address	County and Municipality	Telephone No.	Relationship to Applicant
Laser Northeast Gathering Company, LLC	1212 S. Abington Rd., 1st Floor Clarks Summit, PA 18411	South Abington Twp. Lackawanna County	(570) 319-1800	Regional Office

Provide the names and business addresses of all general partners of the applicant and parent and subsidiary corporations, if any.

Name	Business Address
N/A	

List the names and business address of persons with overall management responsibility for the process being permitted (i.e. plant manager).

Name	Business Address
William C. Stevens	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411
Dale Harper	333 Clay St., Suite 4500, Houston, TX 77002
Tom Karam	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411
John F. Walsh	1212 S. Abington Rd., 1st Floor, Clarks Summit, PA 18411

Plan Approvals or Operating Permits. List all plan approvals or operating permits issued by the Department or an approved local air pollution control agency under the APCA to the applicant or related parties that are currently in effect or have been in effect at any time 5 years prior to the date on which this form is notarized. This list shall include the plan approval and operating permit numbers, locations, issuance and expiration dates. Attach additional sheets as necessary.

Air Contamination Source	Plan Approval/ Operating Permit#	Location	Issuance Date	Expiration Date
N/A				

Compliance Background. (Note: Copies of specific documents, if applicable, must be made available to the Department upon its request.) List all documented conduct of violations or enforcement actions identified by the Department pursuant to the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification. Unless specifically directed by the Department, deviations which have been previously reported to the Department in writing, relating to monitoring and reporting, need not be reported.

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status: Litigation Existing/Continuing or Corrected/Date	Dollar Amount Penalty
N/A						$
						$
						$
						$
						$
						$
						$
						$
						$
						$

List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Litigation Existing/Continuing Or Corrected/Date
N/A				

CONTINUING OBLIGATION. Applicant is under a continuing obligation to update this form using the Compliance Review Supplemental Form if any additional deviations occur between the date of submission and Department action on the application.

VERIFICATION STATEMENT

Subject to the penalties of Title 18 Pa.C.S. Section 4904 and 35 P.S. Section 4009(b)(2), I verify under penalty of law that I am authorized to make this verification on behalf of the Applicant/Permittee. I further verify that the information contained in this Compliance Review Form is true and complete to the best of my belief formed after reasonable inquiry. I further verify that reasonable procedures are in place to ensure that "documented conduct" and "deviations" as defined in 25 Pa Code Section 121.1 are identified and included in the information set forth in this Compliance Review Form.

Signature	Date: 6-24-11
John F. Walsh	
Name (Print or Type)	
Chief Operating Officer – Compression Services, Laser Northeast Gathering Company, LLC	
Title	

APPENDIX C
TECHNICAL DATA

Gas Analytical Services, Inc.
P.O. Box 1028
Bridgeport, WV 26330-0461
Phone: (304) 623-0020
FAX: (304) 624-8065

Analysis#:	67879
Run Date:	10/27/2009
Run Time:	8:50
Cylinder#:	

FRACTIONAL ANALYSIS

Customer:	Manek Energy	Sample Date:	10/19/2009
Field:	Component Analysis	Sample Time:	5:45
		Collected By:	Corry
Station:	Alla Resources	Effective Date:	10/19/2009
Meter:		Sample Pressure:	132.00 PSIG
Sample Type:	Spot	Sample Temp. (°F):	N/G

Component	MOL%	GPM
Methane	97.3185	
Ethane	2.2650	0.60
Propane	0.0750	0.02
I-Butane	0.0015	
N-Butane	0.0045	
I-Pentane	0.0000	
N-Pentane	0.0000	
Nitrogen	0.2937	
CO2	0.0318	
Oxygen	0.0100	
Hexanes+	0.0000	
Total:	100.0000	0.62

Analytical Results at Base Conditions (Real)	
BTU/SCF (Dry):	1029.5859
BTU/SCF (Saturated):	1012.5891
PSIA:	14.7300
Temperature (°F):	60.00
Z Factor (Dry):	0.99793
Z Factor (Saturated):	0.99789

Analytical Results at Contract Conditions (Real)	
BTU/SCF (Dry):	1029.5859
BTU/SCF (Saturated):	1012.5891
PSIA:	14.7300
Temperature (°F):	60.00
Z Factor (Dry):	0.99793
Z Factor (Saturated):	0.99790

Calculated Specific Gravities	
Ideal Gravity:	0.5671
Real Gravity:	0.5680

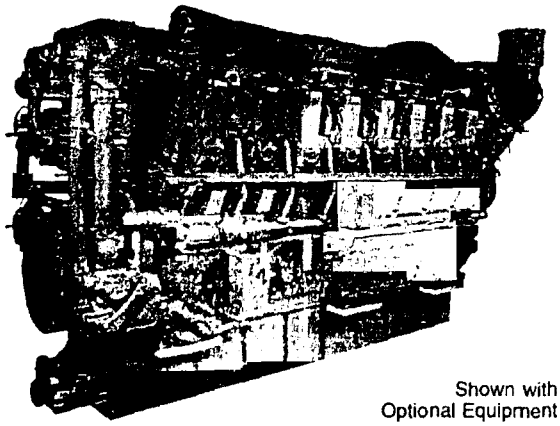
Gross Heating Values are Based on GPA 2145-09, 2172, 2261.
Compressibility is Calculated using AGA-8.

CAT®

G3616 LE Gas Petroleum Engine

3531-3762 bkW
(4735-5045 bhp)
1000 rpm

0.5 g/bhp-hr NOx or 0.7 g/bhp-hr NOx (NTE)



Shown with Optional Equipment

CAT® ENGINE SPECIFICATIONS

V-16, 4-Stroke-Cycle

Bore	300 mm (11.8 in.)
Stroke	300 mm (11.8 in.)
Displacement	339.18 L (20,698 cu. in.)
Aspiration	Turbocharged-Aftercooled
Digital Engine Management	
Governor and Protection	Electronic (ADEM™ A3)
Combustion	Low Emission (Lean Burn)
Engine Weight	
net dry (approx)	29,891 kg (65,900 lb)
Power Density	8.0 kg/kW (13.1 lb/hp)
Power per Displacement	14.9 bhp/L
Total Cooling System Capacity	972.9 L (257 gal)
Jacket Water	900.9 L (238 gal)
Aftercooler Circuit	71.9 L (19 gal)
Lube Oil System (refill)	1328.7 L (351 gal)
Oil Change Interval	5000 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel Teeth	255

FEATURES

Engine Design
- Proven reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range

Emissions
Meets U.S. EPA Spark Ignited Stationary NSPS Emissions for 2010/11 with the use of an oxidation catalyst

Lean Burn Engine Technology
Lean-burn engines operate with large amounts of excess air. The excess air absorbs heat during combustion reducing the combustion temperature and pressure, greatly reducing levels of NOx. Lean-burn design also provides longer component life and excellent fuel consumption.

Ease of Operation
- High-strength pan and rails for excellent mounting and stability
- Side covers on block allow for inspection of internal components

Advanced Digital Engine Management
ADEM A3 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system. ADEM A3 has improved: user interface, display system, shutdown controls, and system diagnostics.

Full Range of Attachments
Large variety of factory-installed engine attachments reduces packaging time.

Testing
Every engine is full-load tested to ensure proper engine performance.

Gas Engine Rating Pro
GERP is a PC-based program designed to provide site performance capabilities for Cat® natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

Product Support Offered Through Global Cat Dealer Network
More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Cat parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•S℠ program matches your oil and coolant samples against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience
Over 60 years of natural gas engine production

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products
- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site
For all your petroleum power requirements, visit www.catoilandgas.cat.com

STANDARD EQUIPMENT

Air Inlet System
Air cleaner — standard duty
Inlet air adapter

Control System
A3 control system — provides electronic governing integrated with air/fuel ratio control and individual cylinder ignition timing control

Cooling System
Jacket water pump
Jacket water thermostats and housing
Aftercooler pump
Aftercooler water thermostats and housing
Single-stage aftercooler

Exhaust System
Dry wrapped exhaust manifolds
Vertical outlet adapter

Flywheel & Flywheel Housing
SAE standard rotation

Fuel System
Gas admission valves — electronically controlled fuel supply pressure

Ignition System
A3 control system — senses individual cylinder detonation and controls individual cylinder timing

Instrumentation
LCD display panel — monitors engine parameters and displays diagnostic codes

Lube System
Crankcase breathers — top mounted
Oil cooler
Oil filter
Oil pan drain valve

Mounting System
Engine mounting feet (six total)

Protection System
Electronic shutoff system with purge cycle
Crankcase explosion relief valves
Gas shutoff valve

Starting System
Air starting system

General
Paint — Cat yellow
Vibration dampers

OPTIONAL EQUIPMENT

Air Inlet System
Heavy-duty air cleaner with precleaners
Heavy-duty air cleaner with rain protection

Charging System
Charging alternators

Control System
Custom control system software — available for non-standard ratings, field programmable using flash memory

Cooling System
Expansion tank
Flexible connections
Jacket water heater

Exhaust System
Flexible bellows adapters
Exhaust expander
Weld flanges

Fuel System
Fuel filter
Gas pressure regulator
Flexible connection
Low energy fuel system
Corrosive gas fuel system

Ignition System
CSA certification

Instrumentation
Remote data monitoring and speed control
Compatible with Cat Electronic Technician (ET) and Data View
Communication Device — PL1000T/E
Display panel deletion is optional

Lube System
Air or electric motor-driven prelube
Duplex oil filter
LH or RH service
Lube oil makeup system

Mounting System
Mounting plates (set of six)

Power Take-Offs
Front stub shafts

Starting System
Air pressure reducing valve
Natural gas starting system

General
Engine barring device
Damper guard

TECHNICAL DATA

G3616 LE Gas Petroleum Engine — 1000 rpm

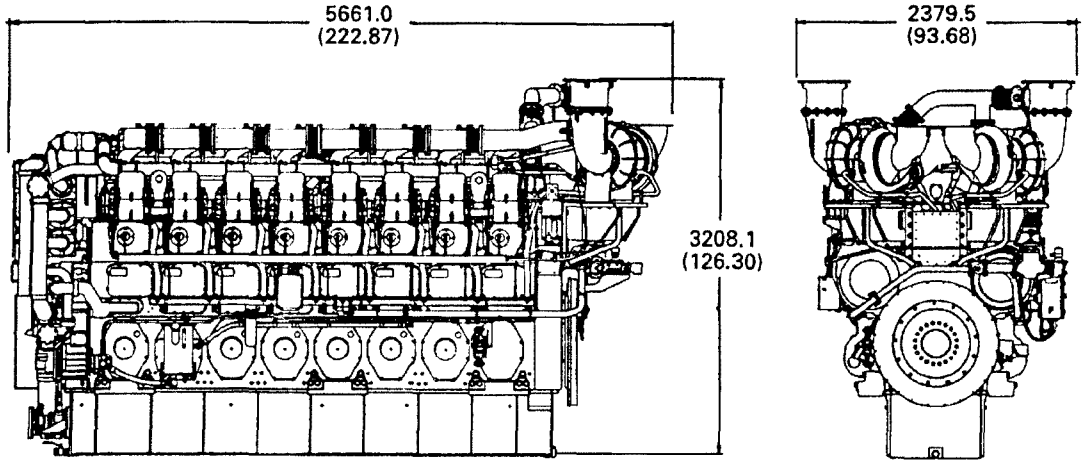
		DM5133-03	DM5563-03	DM5564-03	DM8608-02
Engine Power					
@ 100% Load	bkW (bhp)	3646 (4890)	3531 (4735)	3762 (5045)	3531 (4735)
@ 75% Load	bkW (bhp)	2735 (3668)	2648 (3551)	2882 (3784)	2648 (3551)
Engine Speed	rpm	**1000**	**1000**	**1000**	**1000**
Max Altitude @ Rated Torque and 38°C (100°F)	m (ft)	1219.2 (4000)	609.6 (2000)	1219.2 (4000)	609.6 (2000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	20	24	20	24
SCAC Temperature	°C (°F)	43 (110)	54 (130)	32 (90)	54 (130)
Emissions*					
NOx	g/bkW-hr (g/bhp-hr)	.94 (0.7)	.94 (0.7)	.94 (0.7)	.67 (0.5)
CO	g/bkW-hr (g/bhp-hr)	3.4 (2.5)	3.4 (2.5)	3.4 (2.5)	3.7 (2.75)
CO_2	g/bkW-hr (g/bhp-hr)	585 (436)	587 (437)	583 (435)	589 (439)
VOC**	g/bkW-hr (g/bhp-hr)	0.78 (0.58)	0.81 (0.6)	0.76 (0.57)	0.85 (0.63)
Fuel Consumption***					
@ 100% Load	MJ/bkW-hr (Btu/bhp-hr)	9.28 (6556)	9.3 (6576)	9.25 (6537)	9.35 (6605)
@ 75% Load	MJ/bkW-hr (Btu/bhp-hr)	9.67 (6834)	9.71 (6863)	9.63 (6805)	9.75 (6893)
Heat Balance					
Heat Rejection to Jacket Water					
@ 100% Load	bkW (Btu/min)	869 (49,438)	842 (47,922)	894 (50,884)	842 (47,935)
@ 75% Load	bkW (Btu/min)	764 (43,434)	730 (41,488)	798 (45,348)	735 (41,766)
Heat Rejection to Aftercooler					
@ 100% Load	bkW (Btu/min)	660 (37,526)	578 (32,889)	744 (42,366)	602 (34,290)
@ 75% Load	bkW (Btu/min)	317 (18,044)	261 (14,841)	376 (21,397)	274 (15,569)
Heat Rejection to Exhaust LHV to 25°C (77° F)					
@ 100% Load	bkW (Btu/min)	3627 (206,280)	3596 (204,497)	3655 (207,837)	3609 (205,248)
@ 75% Load	bkW (Btu/min)	2927 (166,440)	2916 (165,846)	2933 (166,812)	2928 (166,501)
Exhaust System					
Exhaust Gas Flow Rate					
@ 100% Load	m^3/min (cfm)	913.87 (32,273)	898.35 (31,725)	928.85 (32,802)	908.97 (32,100)
@ 75% Load	m^3/min (cfm)	726.21 (25,646)	716.90 (25,317)	734.94 (25,954)	725.36 (25,616)
Exhaust Stack Temperature					
@ 100% Load	°C (°F)	461 (862)	469 (876)	453 (847)	458 (856)
@ 75% Load	°C (°F)	481 (898)	492 (918)	469 (877)	481 (897)
Intake System					
Air Inlet Flow Rate					
@ 100% Load	m^3/min (scfm)	348.10 (12,293)	338.47 (11,953)	357.73 (12,633)	348.13 (12,294)
@ 75% Load	m^3/min (scfm)	269.12 (9504)	261.76 (9244)	276.49 (9764)	269.21 (9507)
Gas Pressure	kPag (psig)	295-324 (42.8-47)	295-324 (42.8-47)	295-324 (42.8-47)	295-324 (42.8-47)

*at 100% load and speed, all values are listed as not to exceed
**Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ
***ISO 3046/1

G3616 LE GAS PETROLEUM ENGINE

3531-3762 bkW (4735-5045 bhp)

GAS PETROLEUM ENGINE



DIMENSIONS		
Length	mm (in)	5661.0 (222.87)
Width	mm (in)	2379.5 (93.68)
Height	mm (in)	3208.1 (126.30)
Shipping Weight	kg (lb)	29,891 (65,900)

Note: General configuration not to be used for installation. See general dimension drawing number 246-1515 for detail.

RATING DEFINITIONS AND CONDITIONS

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.

Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in. Hg) and 15° C (59° F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in. Hg) and 15.6° C (60.1° F). Air flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and 25° C (77° F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and stack temperature.

Performance Numbers: DM5133-03, DM5563-03, DM5564-03, DM8608-02
LEHW0042-03 (8-10)

MAXIM SILENCERS

Emission Control Application Data Sheet

Maxim Silencers, Inc.
10535 Brighton Lane
Stafford, Texas 77477
Phone: 832 554-0990
Fax: 832 554-0999

Customer: [redacted] Project: [redacted] Date: [redacted]

Sales Person: [redacted] Site Elevation: [redacted] ft Contact: [redacted] Order/Quote #: [redacted]

Matt Wendt
MAXIM SILENCERS INC.
7, JAN. 2011

Engine Data:

Engine Model:	Caterpillar G3616		Speed:	1000	RPM
Fuel & Operating Type:	Natural Gas Lean Burn		Engine Power:	4735	Hp KW
Exhaust Flow Rate:	32100 54538 62929	acfm m^3/hr lbs/hr	Exhaust Temperature:	752 400	°F °C

QAC (Quick Access Catalyst) Data:

Number of Cores:	12				
Model:	MCCOS-1200		Inlet Size:	(2) 18	in
Grade:	Hospital Plus		Outlet Size:	32	in
Body Diameter:	86.625	in	Body Length:	414	in
Estimated weight:	20400 9256	lbs Kg	Estimated Back Pressure:	6.87 17.1	in of WC mbar
			Speed through inlet:	5931	ft/min

Emission:

Min. Temp. at Core Face: 752 °F 400 °C
Max. Temp. at Core Face: 946 °F 508 °C

Catalyst Type: Oxidation

	Pollutant					
	NOx	CO	NMNEHC/VOC	H_2CO		
Engine Out / Pre Emission:	0.5	2.75	0.63	0.4	g/bhp-hr	
Post Emission:	0.500	0.05	0.20	0.0056	g/bhp-hr	
	0.0	*98.3*	*69.0*	*98.6*	% Reduction	
	5.22	0.49	2.04	0.06	lb/hr	
	22.86	2.14	8.93	0.26	tons/year operation	8760 hr/year
	51.3	4.8	20.1	0.6	ppmv	
	28.3	2.6	11.0	0.3	ppmvd @ 15% O2	

Acoustics:

Frequency Band (Hz):	63	125	250	500	1000	2000	4000	8000	
Estimated Attenuation (dB):	28	46	44	42	45	48	47	45	No Element
Plus:	29	54	52	50	52	53	53	52	One Element Layer
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	

Warranty & Notes:

- If Pre-Emission levels are not as noted above, contact Maxim for a re-quote.
- To achieve Post Emissions levels detailed above, exhaust temperature and Pre-Emission data must be as specified.
- Maximum allowable exhaust temperature at core face is 1350°F.
- If applicable, the engine will require an air/fuel ratio controller to meet above emission levels. For Rich Burn engines λ must be 0.98 - 0.99.
- Catalyst cleaning/regeneration required, if initial backpressure increases by 2" of WC.
- Engine operation to be stable and reproducible.
- QAC is not designed to withstand a backfire, therefore measures should be taken prior to QAC unit to alleviate backfire pressure.
- Maximum lubrication oil consumption rate to be less than 0.0015 lb/bhp/hr.
- Lube oil sulfate ash contents should not exceed 0.5%.
- Phosphorus and/or Zinc should not exceed 8 ppmv in the exhaust stream.
- A high temperature alarm/shutdown to be maintained at downstream of catalyst at 1300°F.
- Fuel not to contain heavy or transition metals such as Pb, Ar, Zn, Cu, Sn, Fe, Ba, Ni, Cr etc.
- Chlorinated or Silicone containing compounds in the exhaust not to exceed 1 ppmv.
- Sulfur compounds in the exhaust gas stream not to exceed 25 ppmv.
- Performance guarantee is voided should the catalyst become masked or de-activated by any contaminant in the exhaust stream.
- Engine to be maintained and operated in accordance within manufacturer's recommended practice.
- Under no condition will Maxim Silencers Inc. assume any contingent liabilities.
- Operating manual is available online at www.maximsilencers.com or contact a Maxim sales representative.
- Nomenclature: QAC4-292-8, 4 is grade (Super Critical), 29 is catalyst block size, 2 is no. of catalyst(s) and 8 is flange diameter.
- Maxim's standard one year warranty applies.
- CO may starts to form at low GHSV.

V1/2011

APPENDIX D
SUPPORTING DOCUMENTS FOR EMISSIONS CALCULATIONS

Site Name
Site-Wide Totals
Emissions, tpy
Notes:

SHIELDS COMPRESSOR STATION - TOTAL SITE EMISSIONS

4 CAT G3616 COMPRESSOR ENGINES - 100%

SUSQUEHANNA COUNTY PENNSYLVANIA

EPN or DESCRIPTION	VOC	NO_X	CO	SO_2	PM_{10}	Formaldehyde	Other vHAPs	All vHAPs	CO_2e
SC161, SC162, SC163, SC164	36.5772	91.4431	9.1443	0.3339	5.6710	1.0242	2.3115	3.3356	65,412
MAINTENANCE EMISSIONS	0.0040							0.0000	
FUGITIVE EMISSIONS	0.0168							0.0000	
3 DEHY REBOILERS	0.0256	0.6480	0.5443	0.0039	0.0492	0.0005	0.0117	0.0122	782
SDSV1, SDSV2 & SDSV3	9.7812							0.0000	12,557
TRUCKLOADING	0.0616							0.0000	
ST01 (WASTE WATER)	1.0130							0.0000	
ST02 (TEG)	0.0000							0.0000	
ST03 (COOLANT)	0.0006							0.0000	
ST04 (LUBE OIL)	0.0000							0.0000	
TOTAL	**47.4900**	**92.0911**	**9.6886**	**0.3378**	**5.7202**	**1.0246**	**2.3232**	**3.3478**	**78,750**
MAJOR SOURCE THRESHOLD	*50*	*100*	*100*	*100*	*100*	*10*	*10 / 25*	*10 / 25*	*100,000*

SHIELDS COMPRESSOR STATION

Engine Calculations CAT G3616 MAXIM Silencer

Revised Date: 07/19/2011

SUSQUEHANNA PIPELINE

Engine Input Maximum Operating Parameters (individual engine emissions)

Description Item	EPN	SC161	SC162	SC163	SC164	
	Make	CAT	CAT	CAT	CAT	
	Model	3616	3616	3616	3616	Totals
Engine RPM =		1,000	1,000	1,000	1,000	
Fuel Consumption Factor (Btu/bph-hr) =		6,732	6,732	6,732	6,732	
Engine BHp Rating =		4,735	4,735	4,735	4,735	
Fuel Heating Value (Btu/SCF) =		1,030	1,030	1,030	1,030	
Exhaust Gas Temperature (F) =		876	876	876	876	
Exhaust Gas Flow (lb/hr) =		58,624	58,624	58,624	58,624	
Fuel Gas Molecular Weight (lb/lb-mole) =		17,163	17,163	17,163	17,163	
For Exhaust Gas, K =		2,275	2,275	2,275	2,275	
Engine Fuel Consumption (SCF/hr) =		31,466.950	31,466.950	31,466.950	31,466.950	125,867.800
Engine Fuel Consumption (lb/hr) =		1,424.938	1,424.938	1,424.938	1,424.938	5,699.752
Compression Limit (Hp-hr/yr) =		41,478,600	41,478,600	41,478,600	41,478,600	165,914,400
Engine Exhaust Gas Flow (CF/min) =		32,100	32,100	32,100	32,100	
Engine Exhaust Gas Flow (CF/hr) =		1,926,000	1,926,000	1,926,000	1,926,000	
Stack Exit Velocity (ft/sec) =		109.04	109.04	109.04	109.04	
Engine % Utilization =		100%	100%	100%	100%	
Stack Diameter (ft) =		2.5	2.5	2.5	2.5	
Emission Limited Per Engine (yes / no)		no	no	no	no	
Atmospheric Pressure (psia)		14.7	14.7	14.7	14.7	
Emission Factors: (grams/Hp-hr)						Emission Factor Source
	VOC (non-CH_4)	0.2000	0.2000	0.2000	0.2000	Vendor Data (Maxim)
	NO_X	0.5000	0.5000	0.5000	0.5000	Vendor Data (Maxim)
	CO	0.0500	0.0500	0.0500	0.0500	Vendor Data (Maxim)
	Formaldehyde	0.0056	0.0056	0.0056	0.0056	Vendor Data (Maxim)
	PM_{10}	0.0310	0.0310	0.0310	0.0310	AP-42
	$PM_{2.5}$	0.0310	0.0310	0.0310	0.0310	AP-42
	SO_2	0.0018	0.0018	0.0018	0.0018	AP-42
	vHAPs	0.0126	0.0126	0.0126	0.0126	AP-42 (w/ control)

SHIELDS COMPRESSOR STATION
Engine Calculations
Revised Date: 07/19/2011

Estimated Engine Operating Hours

Month	Hrs Available	SC161 100%	SC162 100%	SC163 100%	SC164 100%	Totals
Jan	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Feb	672.0000	672.0000	672.0000	672.0000	672.0000	2,688.0000
Mar	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Apr	720.0000	720.0000	720.0000	720.0000	720.0000	2,880.0000
May	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Jun	720.0000	720.0000	720.0000	720.0000	720.0000	2,880.0000
Jul	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Aug	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Sep	720.0000	720.0000	720.0000	720.0000	720.0000	2,880.0000
Oct	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Nov	720.0000	720.0000	720.0000	720.0000	720.0000	2,880.0000
Dec	744.0000	744.0000	744.0000	744.0000	744.0000	2,976.0000
Totals	8,760.0000	8,760.0000	8,760.0000	8,760.0000	8,760.0000	35,040.0000

Estimated Engine Fuel Consumption (MMSCF)

EPN	SC061	SC062	SC063	SC064	Total
Jan	23.411	23.411	23.411	23.411	93.646
Feb	21.146	21.146	21.146	21.146	84.583
Mar	23.411	23.411	23.411	23.411	93.646
Apr	22.656	22.656	22.656	22.656	90.625
May	23.411	23.411	23.411	23.411	93.646
Jun	22.656	22.656	22.656	22.656	90.625
Jul	23.411	23.411	23.411	23.411	93.646
Aug	23.411	23.411	23.411	23.411	93.646
Sep	22.656	22.656	22.656	22.656	90.625
Oct	23.411	23.411	23.411	23.411	93.646
Nov	22.656	22.656	22.656	22.656	90.625
Dec	23.411	23.411	23.411	23.411	93.646
Totals	275.650	275.650	275.650	275.650	1,102.602

SHIELDS COMPRESSOR STATION
Revised Date: 07/19/2011
ENGINE CALCULATION SUMMARY SHEET FOR CAT 3616

Average Plant Fuel Heating Value = 1,030 Btu/SCF
Maximum Fuel H_2S Content = 0.25 grains/100 SCF

EPN	SC161	SC162	SC163	SC164	Totals
Rating (Hp)	4,735	4,735	4,735	4,735	
Operating Hours	8,760	8,760	8,760	8,760	35,040
Power (Hp-hrs/yr)	41,478,600	41,478,600	41,478,600	41,478,600	165,914,400
Fuel Use (MMSCF/yr)	275.650	275.650	275.650	275.650	1,102.602
Heat Input (MMBtu/hr)	32.411	32.411	32.411	32.411	
Heat Input (MMBtu/yr)	283,919.996	283,919.996	283,919.996	283,919.996	851,759.989

Emission Factors g/Hp-hr)

EPN	SC161	SC162	SC163	SC164
NO_X	0.5000	0.5000	0.5000	0.5000
CO	0.0500	0.0500	0.0500	0.0500
Formaldehyde	0.0056	0.0056	0.0056	0.0056
vHAPs	0.0126	0.0126	0.0126	0.0126
VOC (non-CH_4)	0.2000	0.2000	0.2000	0.2000
PM_{10}	0.0310	0.0310	0.0310	0.0310
SO_2	0.0018	0.0018	0.0018	0.0018

Engine Emission Calculations (tons/yr)

EPN	SC161	SC162	SC163	SC164	Totals
NO_X	22.861	22.861	22.861	22.861	91.443
CO	2.286	2.286	2.286	2.286	9.144
Formaldehyde	0.256	0.256	0.256	0.256	1.024
vHAPs	0.578	0.578	0.578	0.578	2.311
VOC (non-CH_4)	9.144	9.144	9.144	9.144	36.577
PM_{10}	1.418	1.418	1.418	1.418	5.671
SO_2	0.083	0.083	0.083	0.083	0.334

Engine Emission Calculations lbs/hr)

EPN	SC161	SC162	SC163	SC164	Totals
NO_X	5.219	5.219	5.219	5.219	20.877
CO	0.522	0.522	0.522	0.522	2.088
Formaldehyde	0.058	0.058	0.058	0.058	0.234
vHAPs	0.132	0.132	0.132	0.132	0.528
VOC (non-CH_4)	2.088	2.088	2.088	2.088	8.351
PM_{10}	0.3237	0.3237	0.3237	0.3237	1.295
SO_2	0.019	0.019	0.019	0.019	0.076

SHIELDS COMPRESSOR STATION
Engine Calculations
Revised Date: 07/19/2011

EMISSION RATE POTENTIAL

Maximim Operating Parameters (Individual Emissions)

Average Plant Fuel Heating Value = 1,030 Btu/SCF
Maximum Fuel H_2S Content = 0.25 grains/100 SCF

EPN	SC161	SC162	SC163	SC164	Totals
Rating (Hp)	4,735	4,735	4,735	4,735	
Operating Hours	8,760	8,760	8,760	8,760	35,040
Power (Hp-hrs/yr)	41,478,600	41,478,600	41,478,600	41,478,600	165,914,400
Fuel Use (MMSCF/yr)	275.650	275.650	275.650	275.650	1,102.602
Heat Input (MMBtu/hr)	32.411	32.411	32.411	32.411	
Heat Input (MMBtu/yr)	283,919.996	283,919.996	283,919.996	283,919.996	851,759.989

Emission Factors g/Hp-hr)

EPN	SC161	SC162	SC163	SC164
NO_X	0.5000	0.5000	0.5000	0.5000
CO	2.7500	2.7500	2.7500	2.7500
Formaldehyde	0.4000	0.4000	0.4000	0.4000
vHAPs	0.0126	0.0126	0.0126	0.0126
VOC (non-CH_4)	0.6300	0.6300	0.6300	0.6300
PM_{10}	0.0310	0.0310	0.0310	0.0310
SO_2	0.0018	0.0018	0.0018	0.0018

Engine Emission Calculations (tons/yr)

EPN	SC161	SC162	SC163	SC164	Totals
NO_X	22.861	22.861	22.861	22.861	91.443
CO	125.734	125.734	125.734	125.734	502.937
Formaldehyde	18.289	18.289	18.289	18.289	73.154
vHAPs	0.578	0.578	0.578	0.578	2.311
VOC (non-CH_4)	28.805	28.805	28.805	28.805	115.218
PM_{10}	1.418	1.418	1.418	1.418	5.671
SO_2	0.083	0.083	0.083	0.083	0.334

Engine Emission Calculations lbs/hr)

EPN	SC161	SC162	SC163	SC164	Totals
NO_X	5.219	5.219	5.219	5.219	20.877
CO	28.706	28.706	28.706	28.706	114.826
Formaldehyde	4.175	4.175	4.175	4.175	16.702
vHAPs	0.132	0.132	0.132	0.132	0.528
VOC (non-CH_4)	6.576	6.576	6.576	6.576	26.306
PM_{10}	0.3237	0.3237	0.3237	0.3237	1.295
SO_2	0.019	0.019	0.019	0.019	0.076

Pollutant	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (g/bhp) (fuel input)
1,1 ,2,2-Tetrachloroethane[k]	0.000040	0.000124
1,1 ,2-Trichloroethane[k]	0.000032	0.000099
1,1 -Dichloroethane	0.000024	0.000073
1 ,2-Dichloroethane	0.000024	0.000073
1 ,2-Dichloropropane	0.000027	0.000084
1 ,3-Butadiene[k]	0.000267	0.000829
1 ,3-Dichloropropene[k]	0.000026	0.000082
2,2,4-Trimethylpentane[k]	0.000250	0.000776
Acetaldehyde[k,l]	0.008360	0.025956
Acrolein[k,l]	0.005140	0.015959
Benzene[k]	0.000440	0.001366
Biphenyl[k]	0.000212	0.000658
Carbon Tetrachloride[k]	0.000037	0.000114
Chlorobenzene[k]	0.000030	0.000094
Chloroethane	0.000002	0.000006
Chloroform[k]	0.000029	0.000088
Ethylbenzene[k]	0.000040	0.000123
Ethylene Dibromide[k]	0.000044	0.000138
Methanol[k]	0.002500	0.007762
Methylene Chloride[k]	0.000020	0.000062
n-Hexane[k]	0.001110	0.003446
Naphthalene[k]	0.000074	0.000231
Phenol[k]	0.000024	0.000075
Styrene[k]	0.000024	0.000073
Tetrachloroethane[k]	0.000002	0.000008
Toluene[k]	0.000408	0.001267
Vinyl Chloride[k]	0.000015	0.000046
Xylene[k]	0.000184	0.000571
	0.019384	0.060184
	0.019384	0.060184

MAINTENANCE EMISSIONS

Revised Date: 07/26/2011

LASER NORTHEAST GATHERING COMPANY — SHIELDS COMPRESSOR STATION

DESCRIPTION — BLOWDOWNS FOR — MAINTENANCE EVENTS

EPN — MAINTENANCE

	CAT 3616
REPORT VENT EMISSSIONS? (YES OR NO)	YES
GAS IS VENTED UNDER THE FOLLOWING CONDITIONS	
PURGE DURATION (MIN)	0.250
PURGE FREQUENCY (TIMES/MONTH)	2.000
PURGED GAS PER EVENT (MSCF)	2.000
ESTIMATED PURGE RATE (MMSCFD)	11.52
ESTIMATED PURGE RATE (SCFM)	8,000.00
ESTIMATED PURGE RATE (SCFH)	480,000.00
STACK DIAMETER (FT)	2.5
STACK HEIGHT (FT)	25.0
TEMPERATURE (F)	68.0
PRESSURE (PSIA)	14.7
VOLUME OF GAS PURGED (SCF/EVENT)	2,000
VOLUME OF GAS PURGED (MMSCF/YR)	0.048

CAT 3616

COMPOUND	VENT GAS MOL%	MOL. WT.	CALC. MOL. WT.	EMISSIONS MOLES/YR	EMISSIONS LBS/HR	EMISSIONS tpy
BENZENE	0.000%	78.110	0.0000	0.000	0.000	0.000
BUTANE	0.005%	58.120	0.0029	0.057	3.312	0.000
CO		28.000				
CO2	0.032%	44.010	0.0141	0.403	17.725	0.001
ETHANE	2.265%	30.070	0.6811	28.686	862.588	0.043
ETHYLBENZENE	0.000%	106.160	0.0000	0.000	0.000	0.000
H2S		34.076				
HEXANES	0.000%	86.178	0.0000	0.000	0.000	0.000
METHANE	97.319%	16.040	15.6100	1,232.530	19,769.778	0.988
N2	0.294%	28.013	0.0824	3.720	104.199	0.005
NOX		48.010				
PENTANE	0.000%	72.151	0.0000	0.000	0.000	0.000
PM10		0.000				
PROPANE	0.075%	44.100	0.0331	0.950	41.889	0.002
SO2		64.060				
TOLUENE	0.000%	92.130	0.0000	0.000	0.000	0.000
TSP		0.000				
XYLENE	0.000%	106.160	0.0000	0.000	0.000	0.000
VOC-U	0.000%	97.500	0.0000	0.000	0.000	0.000
	100%		16.4235	1,266.3460	20,799.4910	1.0390

VOC (TPY)	0.002
VOC (LBS/HR)	45.202
VOC (LBS/HR) annualized	0.001
Gas Exit Velocity (ft/sec)	0.01

TOTAL EMISSIONS FROM ALL MAINTENANCE ON ALL FOUR COMPRESSION ENGINES

VOC (TPY)	**0.008**
VOC (LBS/HR)	**180.808**
VOC (LBS/HR) annualized	**0.004**

PLANT FUGITIVE EMISSIONS
SHIELDS COMPRESSOR STATION 07/05/2011

	LENGTH	WIDTH	HT
EPN:			
ENTER SOURCE DIMENSIONS (FT)	640	640	3
EMISSIONS REDUCTION FACTOR FOR FLANGES		0	
EMISSIONS REDUCTION FACTOR FOR ALL OTHER COMPONENTS		0	

PLANT FUGITIVE EMISSIONS

COMPONENT	FACTOR LB/HR	FACTOR LB/DAY	QUANTITY	SERVICE HRS PER YR
VALVES				
GAS SERVICE	0.00992	0.23808	33	8,760
LIGHT LIQUID	0.00550	0.13200	10	8,760
HEAVY LIQUID	0.00002	0.00048	0	8,760
PUMPS				
LIGHT LIQUID	0.02866	0.68784	1	8,760
HEAVY LIQUID	0.00113	0.02712	1	8,760
FLANGES				
GAS SERVICE	0.00086	0.02064	126	8,760
LIGHT LIQUID	0.00024	0.00576	20	8,760
HEAVY LIQUID	0.00000	0.00000	0	8,760
OPEN LINES	0.00441	0.10584	1	8,760
RELIEF VALVES	0.01946	0.46704	19	8,760
COMPRESSORS				
GAS SERVICE	0.01946	0.46704	8	8,760
HEAVY LIQUID	0.00007	0.00168	0	8,760
SAMPLE CONNNECTIONS	0.01946	0.46704	8	8,760
CONNECTORS				
GAS SERVICE	0.00046	0.01104	65	8,760
LIGHT LIQUID	0.00046	0.01104	14	8,760
HEAVY LIQUID	0.00024	0.00576	0	8,760

TYPICAL GAS ANALYSIS

GAS COMPONENT	MOLE %	MWT	WT %	MWT
METHANE	97.3186%	16.04	94.964%	15.610
ETHANE	2.2650%	30.07	4.143%	0.681
VOC-U	0.0910%	55.51	0.307%	0.051
CO_2	0.0318%	44.01	0.085%	0.014
N_2	0.2937%	28.01	0.500%	0.082
H_2S	0.0000%	34.08	0.000%	0.000
TOTAL	100.00%			16.438

EMISSION FACTORS
LB/(HR-SOURCE)

COMPONENT	METHANE	ETHANE	VOC	CO_2	N_2	H_2S
VALVES						
GAS SERVICE	0.00942	0.00041	0.00003	0.00001	0.00005	0.00000
LIGHT LIQUID	0.00522	0.00023	0.00002	0.00000	0.00003	0.00000
HEAVY LIQUID	0.00002	0.00000	0.00000	0.00000	0.00000	0.00000
PUMPS						
LIGHT LIQUID	0.02722	0.00119	0.00009	0.00002	0.00014	0.00000
HEAVY LIQUID	0.00107	0.00005	0.00000	0.00000	0.00001	0.00000
FLANGES						
GAS SERVICE	0.00082	0.00004	0.00000	0.00000	0.00000	0.00000
LIGHT LIQUID	0.00023	0.00001	0.00000	0.00000	0.00000	0.00000
HEAVY LIQUID	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OPEN LINES	0.00419	0.00018	0.00001	0.00000	0.00002	0.00000
RELIEF VALVES	0.01848	0.00081	0.00006	0.00002	0.00010	0.00000
COMPRESSORS						
GAS SERVICE	0.01848	0.00081	0.00006	0.00002	0.00010	0.00000
HEAVY LIQUID	0.00007	0.00000	0.00000	0.00000	0.00000	0.00000
SAMPLE CONNNECTIONS	0.01848	0.00081	0.00006	0.00002	0.00010	0.00000
CONNECTORS						
GAS SERVICE	0.00044	0.00002	0.00000	0.00000	0.00000	0.00000
LIGHT LIQUID	0.00044	0.00002	0.00000	0.00000	0.00000	0.00000
HEAVY LIQUID	0.00023	0.00001	0.00000	0.00000	0.00000	0.00000

EMISSION FACTORS
TPY

COMPONENT	METHANE	ETHANE	VOC	CO_2	N_2	H_2S
VALVES						
GAS SERVICE	1.36162	0.05941	0.00441	0.00122	0.00718	0.00000
LIGHT LIQUID	0.22877	0.00998	0.00074	0.00021	0.00121	0.00000
HEAVY LIQUID	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PUMPS						
LIGHT LIQUID	0.11921	0.00520	0.00039	0.00011	0.00063	0.00000
HEAVY LIQUID	0.00470	0.00021	0.00002	0.00000	0.00002	0.00000
FLANGES						
GAS SERVICE	0.45071	0.01967	0.00146	0.00040	0.00238	0.00000
LIGHT LIQUID	0.01997	0.00087	0.00006	0.00002	0.00011	0.00000
HEAVY LIQUID	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
OPEN LINES	0.01834	0.00080	0.00006	0.00002	0.00010	0.00000
RELIEF VALVES	1.53790	0.06710	0.00498	0.00138	0.00810	0.00000
COMPRESSORS						
GAS SERVICE	0.64754	0.02825	0.00210	0.00058	0.00341	0.00000
HEAVY LIQUID	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
SAMPLE CONNNECTIONS	0.64754	0.02825	0.00210	0.00058	0.00341	0.00000
CONNECTORS						
GAS SERVICE	0.12437	0.00543	0.00040	0.00011	0.00066	0.00000
LIGHT LIQUID	0.02679	0.00117	0.00009	0.00002	0.00014	0.00000
HEAVY LIQUID	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TOTAL	**5.18745**	**0.22634**	**0.01679**	**0.00465**	**0.02734**	**0.00000**

DEHYDRATION PLANT EMISSIONS
SHIELDS COMPRESSOR STATION — LASER NORTHEAST GATHERING COMPANY

GLYCOL DEHYDRATION REBOILERS
DESIGN RATING

ITEMS	EPN	SD01	SD02	SD03
UTILIZATION PERCENTAGE		100%	100%	100%
HEAT INPUT RATING (MMBTU/HR)		0.5	0.5	0.5
THERMAL EFFICIENCY		100%	100%	100%
HEAT INPUT RATING ADJUSTED FOR EFFICIENCY		YES	YES	YES
FUEL HEAT CONTENT (BTU/SCF)		1030	1030	1030
FUEL CONSUMPTION (MMSCF/YR)		4.32	4.32	4.32
FUEL CONSUMPTION IN OZONE SEASON (MMSCF)		1.09	1.09	1.09
HEAT INPUT (MMBTU/YR)		4376.16	4376.16	4376.16
EXHAUST TEMPERATURE, T (F) =		800	800	800
PRESSURE, P (PSIA) =		14.7	14.7	14.7
THE RATIO OF $0_2/C0_2$ =		1.925	1.925	1.925
THE RATIO OF H_20/CO_2 =		1.85	1.85	1.85
STACK DIAMETER, (FT) =		1	1	1

AP-42 EMISSION FACTOR (UNCONTROLLED):

	LB/MMSCF
CO	84
NO_x	100
TOC	11
SO_2	0.6
Formaldehyde	0.075
vHAPs	1.80611
TSP	7.6
VOC	5.5

GLYCOL DEHYDRATION REBOILERS HOURS OF OPERATION

MONTH	AVAILABLE HRS/MONTH	EPN	SD01 (HRS)	SD02 (HRS)	SD03 (HRS)
JAN	744		744	744	744
FEB	672		672	672	672
MAR	744		744	744	744
APR	720		720	720	720
MAY	744		744	744	744
JUN	720		720	720	720
JUL	744		744	744	744
AUG	744		744	744	744
SEP	720		720	720	720
OCT	744		744	744	744
NOV	720		720	720	720
DEC	744		744	744	744
TOTAL	8760		8760	8760	8760

GLYCOL DEHYDRATION BOILERS
AP-42 EMISSIONS (LBS/HR)

COMPOUND	EPN	SD01	SD02	SD03	TOTAL
CO		0.040777	0.040777	0.040777	0.122330
NO_x		0.048544	0.048544	0.048544	0.145631
VOC (TOTAL)		0.005340	0.005340	0.005340	0.016019
VOC (NMNE)		0.002670	0.002670	0.002670	0.008010
SO_2		0.000291	0.000291	0.000291	0.000874
TSP		0.003689	0.003689	0.003689	0.011068
Formaldehyde		0.000036	0.000036	0.000036	0.000109
vHAPs		0.000877	0.000877	0.000877	0.002630

AP-42 EMISSIONS (TONS/HR)

COMPOUND	EPN	SD01	SD02	SD03	TOTAL
CO		0.1814	0.1814	0.1814	0.5443
NO_x		0.2160	0.2160	0.2160	0.6480
VOC (TOTAL)		0.0238	0.0238	0.0238	0.0713
VOC (NMNE)		0.0119	0.0119	0.0119	0.0356
SO_2		0.0013	0.0013	0.0013	0.0039
TSP		0.0164	0.0164	0.0164	0.0492
Formaldehyde		0.0002	0.0002	0.0002	0.0005
vHAPs		0.0039	0.0039	0.0039	0.0117

DEHYDRATOR STILL VENTS
DATA ENTRY

ITEM	STILL VENT EPN	SDSV1	SDSV2	SDSV3
MAX. DEHY UNIT PROCESSING RATE MMSCF/D) =		80	80	80
ESTIMATED DEHY UNIT OPERATION (HRS) =		8760	8760	8760
VENT EXHAUST GAS TEMPERATURE (F) =		212	212	212
EXHAUST GAS PRESSURE (PSIA) =		14.7	14.7	14.7
STACK DIAMETER (FT) =		1	1	1
DATA ENTRY FOR MEOH INJECTION LOSS CALCULATIONS:				
ESTIMATED TIME % MEOH INJECTION IS REQUIRED =		6.9	6.9	6.9
METHANOL REQUIREMENTS (GALS/MMSCF) =		2	2	2
METHANOL DENSITY (LBS/GAL)		6.6	6.6	6.6
PERCENTAGE OF METHANOL REMOVED BY TEG =		80	80	80
ENTER APPLICABLE CONTROL UNIT FOR EPN:	FLARE	NO	NO	NO
	CONDENSER	NO	NO	NO
	OXIDIZER	NO	NO	NO
ARE EMISSIONS REINJECTED IN GAS STREAM?	REINJECTION	NO	NO	NO
REPORT STILL VENT EMISSIONS		NO	NO	NO

ENTER GRI GLYCALC ESTIMATED EMISSIONS IN LBS/HR

COMPOUND	SDSV1 REGEN LBS/HR	FLASH LBS/HR	SDSV2 REGEN LBS/HR	FLASH LBS/HR	SDSV3 REGEN LBS/HR	FLASH LBS/HR	TOTAL LBS/HR
TEG	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MEOH	0.000	0.000	0.000	0.000	0.000	0.000	0.000
METHANE	14.767	121.747	14.767	121.747	14.767	121.747	409.542
ETHANE	1.909	5.408	1.909	5.408	1.909	5.408	21.950
PROPANE	0.285	0.460	0.285	0.460	0.285	0.460	2.233
BUTANE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HEXANE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N-HEXANE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BENZENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOLUENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ETHYLBENZENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
XYLENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2,2,4 TMP	0.000	0.000	0.000	0.000	0.000	0.000	0.000
VOC	0.285	0.460	0.285	0.460	0.285	0.460	2.233
WATER VAPOR	95.500		95.500		95.500		286.500
TOTAL	112.745	128.074	112.745	128.074	112.745	128.074	722.458

ENTER GRI GLYCALC ESTIMATED EMISSIONS IN TPY

COMPOUND	SDSV1 REGEN TPY	FLASH TPY	SDSV2 REGEN TPY	FLASH TPY	SDSV3 REGEN TPY	FLASH TPY	TPY	TOTAL TPY
TEG	0.000	0.000	0.000	0.000	0.000	0.000		0.00
MEOH	0.000	0.000	0.000	0.000	0.000	0.000		0.00
METHANE	64.681	533.250	64.681	533.250	64.681	533.250		1,793.79
ETHANE	8.360	23.687	8.360	23.687	8.360	23.687		96.14
PROPANE	1.247	2.013	1.247	2.013	1.247	2.013		9.78
BUTANE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
HEXANE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
N-HEXANE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
BENZENE	0.000	0.000	0.000	0.000	0.000	0.000		0.00.
TOLUENE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
ETHYLBENZENE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
XYLENE	0.000	0.000	0.000	0.000	0.000	0.000		0.00
2,2,4 TMP	0.000	0.000	0.000	0.000	0.000	0.000		0.00
VOC	1.247	2.013	1.247	2.013	1.247	2.013		9.78
WATER VAPOR	95.500		95.500		95.500			286.50
TOTAL	171.035	560.964	171.035	560.964	171.035	560.964		2,196.00

VOC(NMNE)

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: SHIELDS COMPRESSOR STATION
File Name: C:\Program Files\GRI-GLYCalc4\LASER NORTHEAST GATHERING COMPANY - SHIELDS COMPRESSOR STATION.ddf
Date: July 26, 2011

DESCRIPTION:

Description: UNIT RATE AT 80 MMSCF / D

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	14.7674	354.418	64.6813
Ethane	1.9086	45.806	8.3596
Propane	0.2847	6.834	1.2472
Total Emissions	16.9607	407.058	74.2881
Total Hydrocarbon Emissions	16.9607	407.058	74.2881
Total VOC Emissions	0.2847	6.834	1.2472

FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr
Methane	121.7465	2921.917	533.2498
Ethane	5.4081	129.794	23.6874
Propane	0.4596	11.031	2.0132
Total Emissions	127.6142	3062.742	558.9504
Total Hydrocarbon Emissions	127.6142	3062.742	558.9504
Total VOC Emissions	0.4596	11.031	2.0132

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	136.5140	3276.335	597.9311
Ethane	7.3167	175.600	32.0470
Propane	0.7444	17.865	3.2604
Total Emissions	144.5750	3469.800	633.2385
Total Hydrocarbon Emissions	144.5750	3469.800	633.2385
Total VOC Emissions	0.7444	17.865	3.2604

COMBINED REGENERATOR VENT/FLASH GAS EMISSION CONTROL REPORT:

Component	Uncontrolled	Controlled	% Reduction

	tons/yr	tons/yr	
Methane	597.9311	597.9311	0.00
Ethane	32.0470	32.0470	0.00
Propane	3.2604	3.2604	0.00
Total Emissions	633.2385	633.2385	0.00
Total Hydrocarbon Emissions	633.2385	633.2385	0.00
Total VOC Emissions	3.2604	3.2604	0.00

EQUIPMENT REPORTS:

ABSORBER

Specified Absorber Stages:	1.25
Calculated Dry Gas Dew Point:	4.40 lbs. H2O/MMSCF
Temperature:	100.0 deg. F
Pressure:	989.7 psig
Dry Gas Flow Rate:	80.0000 MMSCF/day
Glycol Losses with Dry Gas:	1.0235 lb/hr
Wet Gas Water Content:	Saturated
Calculated Wet Gas Water Content:	58.33 lbs. H2O/MMSCF
Calculated Lean Glycol Recirc. Ratio:	2.89 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	7.53%	92.47%
Carbon Dioxide	99.85%	0.15%
Nitrogen	99.99%	0.01%
Methane	99.99%	0.01%
Ethane	99.97%	0.03%
Propane	99.95%	0.05%

FLASH TANK

Flash Control:	Vented to atmosphere
Flash Temperature:	100.0 deg. F
Flash Pressure:	975.0 psig

Component	Left in Glycol	Removed in Flash Gas
Water	99.99%	0.01%
Carbon Dioxide	62.00%	38.00%
Nitrogen	11.60%	88.40%
Methane	10.82%	89.18%
Ethane	26.09%	73.91%
Propane	38.25%	61.75%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	28.87%	71.13%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%

STREAM REPORTS:

WET GAS STREAM

Temperature: 100.00 deg. F
Pressure: 1004.40 psia
Flow Rate: 3.34e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.23e-001	1.95e+002
Carbon Dioxide	3.19e-002	1.23e+002
Nitrogen	2.94e-001	7.24e+002
Methane	9.72e+001	1.37e+005
Ethane	2.26e+000	5.98e+003
Propane	1.35e-001	5.23e+002
Total Components	100.00	1.45e+005

DRY GAS STREAM

Temperature: 100.00 deg. F
Pressure: 1004.40 psia
Flow Rate: 3.33e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.26e-003	1.47e+001
Carbon Dioxide	3.19e-002	1.23e+002
Nitrogen	2.94e-001	7.24e+002
Methane	9.73e+001	1.37e+005
Ethane	2.26e+000	5.97e+003
Propane	1.35e-001	5.23e+002
Total Components	100.00	1.44e+005

LEAN GLYCOL STREAM

Temperature: 100.00 deg. F
Flow Rate: 8.66e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	4.80e+003

Water	1.50e+000	7.31e+001
Carbon Dioxide	3.77e-013	1.84e-011
Nitrogen	1.82e-013	8.85e-012
Methane	1.03e-017	5.02e-016
Ethane	1.95e-008	9.52e-007
Propane	2.34e-010	1.14e-008
Total Components	100.00	4.88e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 100.00 deg. F
Pressure: 1004.40 psia
Flow Rate: 9.34e+000 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.23e+001	4.80e+003
Water	4.87e+000	2.53e+002
Carbon Dioxide	5.64e-003	2.93e-001
Nitrogen	1.40e-002	7.30e-001
Methane	2.62e+000	1.37e+002
Ethane	1.41e-001	7.32e+000
Propane	1.43e-002	7.44e-001
Total Components	100.00	5.20e+003

FLASH TANK OFF GAS STREAM

Temperature: 100.00 deg. F
Pressure: 989.70 psia
Flow Rate: 2.96e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.45e-002	2.04e-002
Carbon Dioxide	3.24e-002	1.11e-001
Nitrogen	2.95e-001	6.45e-001
Methane	9.72e+001	1.22e+002
Ethane	2.30e+000	5.41e+000
Propane	1.33e-001	4.60e-001
Total Components	100.00	1.28e+002

FLASH TANK GLYCOL STREAM

Temperature: 100.00 deg. F
Flow Rate: 9.05e+000 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.47e+001	4.80e+003
Water	4.99e+000	2.53e+002
Carbon Dioxide	3.58e-003	1.82e-001
Nitrogen	1.67e-003	8.47e-002
Methane	2.91e-001	1.48e+001

Ethane	3.76e-002	1.91e+000
Propane	5.61e-003	2.85e-001
Total Components	100.00	5.07e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
Pressure: 14.70 psia
Flow Rate: 4.17e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	9.09e+001	1.80e+002
Carbon Dioxide	3.75e-002	1.82e-001
Nitrogen	2.75e-002	8.47e-002
Methane	8.37e+000	1.48e+001
Ethane	5.77e-001	1.91e+000
Propane	5.87e-002	2.85e-001
Total Components	100.00	1.97e+002

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	ST01
City:	Dimock Township
State:	Pennsylvania
Company:	Laser Northeast Gathering Company, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	SHIELDS COMPRESSOR STATION 300 BBL WASTE WATER / PIPELINE FLUIDS STORAGE TANK

Tank Dimensions

Shell Height (ft):	15.00
Diameter (ft):	12.00
Liquid Height (ft) :	14.50
Avg. Liquid Height (ft):	14.50
Volume (gallons):	12,000.00
Turnovers:	12.00
Net Throughput(gal/yr):	144,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.50
Slope (ft/ft) (Cone Roof)	0.08

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Binghamton, New York (Avg Atmospheric Pressure = 13.88 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

ST01 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Condensate (API 53)	Jan	35.71	32.61	38.82	45.87	6.8000	6.8000	6.8000	64.0000			90.00	Option 1: VP40 = 6.8
Condensate (API 53)	Feb	36.74	33.13	40.36	45.87	6.8000	6.8000	6.8357	64.0000			90.00	Option 1: VP40 = 6.8
Condensate (API 53)	Mar	41.51	37.35	45.66	45.87	6.9508	6.8000	7.3685	64.0000			90.00	Option 1: VP40 = 6.8 VP50 = 7.8
Condensate (API 53)	Apr	47.11	42.12	52.10	45.87	7.5112	7.0123	8.0522	64.0000			90.00	Option 1: VP40 = 6.8 VP50 = 7.8
Condensate (API 53)	May	52.49	47.04	57.95	45.87	8.0993	7.5038	8.7541	64.0000			90.00	Option 1: VP50 = 7.8 VP60 = 9
Condensate (API 53)	Jun	56.40	50.76	62.05	45.87	8.5684	7.8910	9.3277	64.0000			90.00	Option 1: VP50 = 7.8 VP60 = 9
Condensate (API 53)	Jul	58.57	52.99	64.15	45.87	8.8284	8.1587	9.6642	64.0000			90.00	Option 1: VP50 = 7.8 VP60 = 9
Condensate (API 53)	Aug	57.37	52.14	62.60	45.87	8.6844	8.0574	9.4154	64.0000			90.00	Option 1: VP50 = 7.8 VP60 = 9
Condensate (API 53)	Sep	53.58	48.86	58.30	45.87	8.2296	7.6859	8.7961	64.0000			90.00	Option 1: VP50 = 7.8 VP60 = 9
Condensate (API 53)	Oct	48.33	44.23	52.42	45.87	7.6326	7.2230	8.0906	64.0000			90.00	Option 1: VP40 = 6.8 VP50 = 7.8
Condensate (API 53)	Nov	43.23	40.20	46.26	45.87	7.1232	6.8203	7.4281	64.0000			90.00	Option 1: VP40 = 6.8 VP50 = 7.8
Condensate (API 53)	Dec	37.94	35.18	40.69	45.87	6.8000	6.8000	6.8692	64.0000			90.00	Option 1: VP40 = 6.8

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ST01 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	2.5609	3.5716	16.5002	30.5492	42.6163	52.1153	59.6312	52.0341	37.3305	26.6578	16.0180	3.6031
Vapor Space Volume (cu ft):	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982
Vapor Density (lb/cu ft):	0.0819	0.0817	0.0827	0.0884	0.0943	0.0990	0.1016	0.1002	0.0956	0.0896	0.0845	0.0815
Vapor Space Expansion Factor:	0.0166	0.0257	0.1063	0.1933	0.2486	0.3031	0.3294	0.2904	0.2228	0.1616	0.1049	0.0235
Vented Vapor Saturation Factor:	0.8063	0.8063	0.8028	0.7903	0.7775	0.7676	0.7622	0.7652	0.7747	0.7876	0.7989	0.8063
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982	75.3982
Tank Diameter (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Vapor Space Outage (ft):	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667
Tank Shell Height (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Average Liquid Height (ft):	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Height (ft):	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Roof Slope (ft/ft):	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800	0.0800
Shell Radius (ft):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0819	0.0817	0.0827	0.0884	0.0943	0.0990	0.1016	0.1002	0.0956	0.0896	0.0845	0.0815
Vapor Molecular Weight (lb/lb-mole):	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.8000	6.8000	6.9508	7.5112	8.0993	8.5684	8.8284	8.6844	8.2296	7.6326	7.1232	6.8000
Daily Avg. Liquid Surface Temp. (deg. R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Average Ambient Temp. (deg. F):	21.1000	22.7000	32.5500	44.3500	55.8000	64.2000	69.1500	67.1500	59.6000	48.8000	38.2500	26.5000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	552.6843	797.6168	1,118.0595	1,424.8596	1,660.8965	1,839.5315	1,831.2824	1,593.0127	1,244.3329	870.5889	533.9654	440.3708
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0166	0.0257	0.1063	0.1933	0.2486	0.3031	0.3294	0.2904	0.2228	0.1616	0.1049	0.0235
Daily Vapor Temperature Range (deg. R):	12.4228	14.4527	16.6260	19.9583	21.8251	22.5802	22.3249	20.9027	18.8830	16.3840	12.1177	11.0242
Daily Vapor Pressure Range (psia):	0.0000	0.0357	0.5665	1.0400	1.2503	1.4367	1.5056	1.3580	1.1102	0.8676	0.6059	0.0692
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.8000	6.8000	6.9508	7.5112	8.0993	8.5684	8.8284	8.6844	8.2296	7.6326	7.1232	6.8000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.8000	6.8000	6.8000	7.0123	7.5038	7.8910	8.1587	8.0574	7.6859	7.2230	6.8203	6.8000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	6.8000	6.8357	7.3665	8.0522	8.7541	9.3277	9.6642	9.4154	8.7961	8.0906	7.4261	6.8692
Daily Avg. Liquid Surface Temp. (deg R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Min. Liquid Surface Temp. (deg R):	492.2754	492.8009	497.0218	501.7929	506.7080	510.4283	512.6591	511.8146	508.5292	503.9001	499.8726	494.8502
Daily Max. Liquid Surface Temp. (deg R):	498.4868	500.0272	505.3349	511.7720	517.6206	521.7184	523.8215	522.2660	517.9708	512.0921	505.9314	500.3623
Daily Ambient Temp. Range (deg. R):	13.6000	14.8000	15.7000	18.3000	19.2000	19.2000	18.9000	18.5000	18.0000	17.0000	13.3000	12.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.8063	0.8063	0.8028	0.7903	0.7775	0.7676	0.7622	0.7652	0.7747	0.7876	0.7989	0.8063
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.8000	6.8000	6.9508	7.5112	8.0993	8.5684	8.8284	8.6844	8.2296	7.6326	7.1232	6.8000
Vapor Space Outage (ft):	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667	0.6667
Working Losses (lb):	124.3429	124.3429	127.1011	137.3485	148.1018	156.6794	161.4342	158.8011	150.4841	139.5677	130.2528	124.3429
Vapor Molecular Weight (lb/lb-mole):	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000	64.0000
Vapor Pressure at Daily Average Liquid												

Surface Temperature (psia):	6.8000	6.8000	6.9508	7.5112	8.0993	8.5684	8.8284	8.6844	8.2296	7.6328	7.1232	6.8000
Net Throughput (gal/mo.):	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000
Annual Turnovers:	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000	12,000.0000
Maximum Liquid Height (ft):	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000	14.5000
Tank Diameter (ft):	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	126.9037	127.9145	143.6013	167.6977	190.7181	208.7947	221.0654	210.8352	187.8146	166.2254	146.2708	127.9460

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

ST01 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Condensate (API 53)	1,682.80	343.19	2,025.99

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	ST02
City:	Dimock Township
State:	Pennsylvania
Company:	Laser Northeast Gathering Company, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	SHIELDS COMPRESSOR STATION 550 GALTEG TANK

Tank Dimensions

Shell Height (ft):	6.00
Diameter (ft):	4.00
Liquid Height (ft) :	5.80
Avg. Liquid Height (ft):	5.80
Volume (gallons):	550.00
Turnovers:	12.00
Net Throughput(gal/yr):	6,600.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.50
Slope (ft/ft) (Cone Roof)	0.25

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Binghamton, New York (Avg Atmospheric Pressure = 13.88 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

ST02 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Triethylene glycol	Jan	35.71	32.61	38.82	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002
Triethylene glycol	Feb	36.74	33.13	40.36	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002
Triethylene glycol	Mar	41.51	37.35	45.66	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002 VP50 = .0002
Triethylene glycol	Apr	47.11	42.12	52.10	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002 VP50 = .0002
Triethylene glycol	May	52.49	47.04	57.95	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP50 = .0002 VP60 = .0002
Triethylene glycol	Jun	56.40	50.76	62.05	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP50 = .0002 VP60 = .0002
Triethylene glycol	Jul	58.57	52.99	64.15	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP50 = .0002 VP60 = .0002
Triethylene glycol	Aug	57.37	52.14	62.60	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP50 = .0002 VP60 = .0002
Triethylene glycol	Sep	53.58	48.86	58.30	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP50 = .0002 VP60 = .0002
Triethylene glycol	Oct	48.33	44.23	52.42	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002 VP50 = .0002
Triethylene glycol	Nov	43.23	40.20	46.26	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002 VP50 = .0002
Triethylene glycol	Dec	37.94	35.18	40.69	45.87	0.0002	0.0002	0.0002	150.2000			150.20	Option 1: VP40 = .0002

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ST02 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Space Volume (cu ft):	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077
Vapor Density (lb/cu ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Space Expansion Factor:	0.0208	0.0248	0.0288	0.0351	0.0383	0.0394	0.0388	0.0361	0.0325	0.0279	0.0198	0.0178
Vented Vapor Saturation Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077	4.6077
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Vapor Space Outage (ft):	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667
Tank Shell Height (ft):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Average Liquid Height (ft):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Height (ft):	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Roof Slope (ft/ft):	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
Shell Radius (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Molecular Weight (lb/lb-mole):	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Daily Avg. Liquid Surface Temp. (deg. R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Average Ambient Temp. (deg. F):	21.1000	22.7000	32.5500	44.3500	55.8000	64.2000	69.1500	67.1500	59.6000	48.8000	38.2500	26.5000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	552.6843	797.6168	1,118.0595	1,424.8598	1,680.8965	1,839.5315	1,831.2824	1,593.0127	1,244.3329	870.5889	533.9654	440.3708
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0208	0.0248	0.0288	0.0351	0.0383	0.0394	0.0388	0.0361	0.0325	0.0279	0.0198	0.0178
Daily Vapor Temperature Range (deg. R):	12.4228	14.4527	16.6260	19.9583	21.8251	22.5802	22.3249	20.9027	18.8830	16.3840	12.1177	11.0242
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Daily Avg. Liquid Surface Temp. (deg R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Min. Liquid Surface Temp. (deg R):	492.2754	492.8009	497.0219	501.7929	506.7080	510.4283	512.6591	511.8146	508.5292	503.9001	499.8726	494.8502
Daily Max. Liquid Surface Temp. (deg R):	498.4868	500.0272	505.3349	511.7720	517.6206	521.7184	523.8215	522.2660	517.9708	512.0921	505.9314	500.3823
Daily Ambient Temp. Range (deg. R):	13.6000	14.8000	15.7000	18.3000	19.2000	19.2000	18.9000	18.5000	18.0000	17.0000	13.3000	12.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Vapor Space Outage (ft):	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667	0.3667
Working Losses (lb):	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
Vapor Molecular Weight (lb/lb-mole):	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000	150.2000
Vapor Pressure at Daily Average Liquid												

Surface Temperature (psia):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Net Throughput (gal/mo.):	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000
Annual Turnovers:	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000	12.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000
Maximum Liquid Height (ft):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

ST02 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Triethylene glycol	0.00	0.00	0.00

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	ST03
City:	Dimock Township
State:	Pennsylvania
Company:	Laser Northeast Gathering Company, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	SHIELDS COMPRESSOR STATION 550 GALCOOLANT STORAGE TANK

Tank Dimensions

Shell Height (ft):	6.00
Diameter (ft):	4.00
Liquid Height (ft) :	5.70
Avg. Liquid Height (ft):	5.70
Volume (gallons):	550.00
Turnovers:	21.00
Net Throughput(gal/yr):	12,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.50
Slope (ft/ft) (Cone Roof)	0.25

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Binghamton, New York (Avg Atmospheric Pressure = 13.88 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

ST03 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Ethylene glycol	Jan	35.71	32.61	38.82	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06
Ethylene glycol	Feb	36.74	33.13	40.36	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06
Ethylene glycol	Mar	41.51	37.35	45.66	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06 VP50 = .06
Ethylene glycol	Apr	47.11	42.12	52.10	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06 VP50 = .06
Ethylene glycol	May	52.49	47.04	57.95	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP50 = .06 VP60 = .06
Ethylene glycol	Jun	56.40	50.76	62.05	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP50 = .06 VP60 = .06
Ethylene glycol	Jul	58.57	52.99	64.15	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP50 = .06 VP60 = .06
Ethylene glycol	Aug	57.37	52.14	62.60	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP50 = .06 VP60 = .06
Ethylene glycol	Sep	53.58	48.86	58.30	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP50 = .06 VP60 = .06
Ethylene glycol	Oct	48.33	44.23	52.42	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06 VP50 = .06
Ethylene glycol	Nov	43.23	40.20	46.26	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06 VP50 = .06
Ethylene glycol	Dec	37.94	35.18	40.69	45.87	0.0600	0.0600	0.0600	62.0000			62.00	Option 1: VP40 = .06

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ST03 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0026	0.0028	0.0036	0.0042	0.0047	0.0047	0.0047	0.0044	0.0039	0.0035	0.0024	0.0023
Vapor Space Volume (cu ft):	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643
Vapor Density (lb/cu ft):	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007
Vapor Space Expansion Factor:	0.0207	0.0248	0.0288	0.0350	0.0383	0.0394	0.0387	0.0361	0.0324	0.0279	0.0198	0.0178
Vented Vapor Saturation Factor:	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643	5.8643
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Vapor Space Outage (ft):	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667
Tank Shell Height (ft):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Average Liquid Height (ft):	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Height (ft):	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Roof Slope (ft/ft):	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
Shell Radius (ft):	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007	0.0007
Vapor Molecular Weight (lb/lb-mole):	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Daily Avg. Liquid Surface Temp. (deg. R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Average Ambient Temp. (deg. F):	21.1000	22.7000	32.5500	44.3500	55.8000	64.2000	69.1500	67.1500	59.6000	48.8000	38.2500	26.5000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	552.6843	797.6168	1,118.0595	1,424.8596	1,680.8965	1,839.5315	1,831.2824	1,593.0127	1,244.3329	870.5889	533.9654	440.3708
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0207	0.0248	0.0288	0.0350	0.0383	0.0394	0.0387	0.0361	0.0324	0.0279	0.0198	0.0178
Daily Vapor Temperature Range (deg. R):	12.4228	14.4527	16.6280	19.9583	21.8251	22.5802	22.3249	20.9027	18.8830	16.3840	12.1177	11.0242
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Daily Avg. Liquid Surface Temp. (deg R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Min. Liquid Surface Temp. (deg R):	492.2754	492.8009	497.0219	501.7929	506.7080	510.4283	512.6591	511.8146	508.5292	503.9001	499.8726	494.8502
Daily Max. Liquid Surface Temp. (deg R):	498.4868	500.0272	505.3349	511.7720	517.6206	521.7184	523.8215	522.2660	517.9708	512.0921	505.9314	500.3623
Daily Ambient Temp. Range (deg. R):	13.6000	14.8000	15.7000	18.3000	19.2000	19.2000	18.9000	18.5000	18.0000	17.0000	13.3000	12.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985	0.9985
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Space Outage (ft):	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667	0.4667
Working Losses (lb):	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886	0.0886
Vapor Molecular Weight (lb/lb-mole):	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000	62.0000
Vapor Pressure at Daily Average Liquid												

Surface Temperature (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Net Throughput (gal/mo.):	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000	1,000.0000
Annual Turnovers:	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000	21.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000
Maximum Liquid Height (ft):	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000	5.7000
Tank Diameter (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0912	0.0914	0.0922	0.0928	0.0933	0.0932	0.0933	0.0930	0.0924	0.0920	0.0910	0.0908

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

ST03 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Ethylene glycol	1.06	0.04	1.11

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	ST04
City:	Dimock Township
State:	Pennsylvania
Company:	Laser Northeast Gathering Company, LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	SHIELDS COMPRESSOR STATION 550 GALLUBE OIL TANK

Tank Dimensions

Shell Height (ft):		6.00
Diameter (ft):		5.50
Liquid Height (ft) :		3.00
Avg. Liquid Height (ft):		3.00
Volume (gallons):		550.00
Turnovers:		3.27
Net Throughput(gal/yr):		1,800.00
Is Tank Heated (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone	
Height (ft)		0.50
Slope (ft/ft) (Cone Roof)		0.18

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Binghamton, New York (Avg Atmospheric Pressure = 13.88 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

ST04 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Lube Oil	Jan	35.71	32.61	38.82	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001
Lube Oil	Feb	36.74	33.13	40.36	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001
Lube Oil	Mar	41.51	37.35	45.66	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001 VP50 = .0001
Lube Oil	Apr	47.11	42.12	52.10	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001 VP50 = .0001
Lube Oil	May	52.49	47.04	57.95	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP50 = .0001 VP60 = .0001
Lube Oil	Jun	56.40	50.76	62.05	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP50 = .0001 VP60 = .0001
Lube Oil	Jul	58.57	52.99	64.15	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP50 = .0001 VP60 = .0001
Lube Oil	Aug	57.37	52.14	62.60	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP50 = .0001 VP60 = .0001
Lube Oil	Sep	53.58	48.86	58.30	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP50 = .0001 VP60 = .0001
Lube Oil	Oct	48.33	44.23	52.42	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001 VP50 = .0001
Lube Oil	Nov	43.23	40.20	46.26	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001 VP50 = .0001
Lube Oil	Dec	37.94	35.18	40.69	45.87	0.0001	0.0001	0.0001	190.0000			387.00	Option 1: VP40 = .0001

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ST04 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	0.0001
Vapor Space Volume (cu ft):	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346
Vapor Density (lb/cu ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Space Expansion Factor:	0.0208	0.0248	0.0288	0.0351	0.0383	0.0394	0.0388	0.0361	0.0325	0.0279	0.0198	0.0178
Vented Vapor Saturation Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346	75.2346
Tank Diameter (ft):	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000
Vapor Space Outage (ft):	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667
Tank Shell Height (ft):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Average Liquid Height (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667	0.1667
Roof Height (ft):	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
Roof Slope (ft/ft):	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800	0.1800
Shell Radius (ft):	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500	2.7500
Vapor Density												
Vapor Density (lb/cu ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vapor Molecular Weight (lb/lb-mole):	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Daily Avg. Liquid Surface Temp. (deg. R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Average Ambient Temp. (deg. F):	21.1000	22.7000	32.5500	44.3500	55.8000	64.2000	69.1500	67.1500	59.6000	48.8000	38.2500	26.5000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358	505.5358
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	552.6843	797.6168	1,118.0595	1,424.8596	1,680.8965	1,839.5315	1,831.2824	1,593.0127	1,244.3329	870.5889	533.9654	440.3708
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0208	0.0248	0.0288	0.0351	0.0383	0.0394	0.0388	0.0361	0.0325	0.0279	0.0198	0.0178
Daily Vapor Temperature Range (deg. R):	12.4228	14.4527	16.6260	19.9583	21.8251	22.5802	22.3249	20.9027	18.8830	16.3840	12.1177	11.0242
Daily Vapor Pressure Range (psia):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Daily Avg. Liquid Surface Temp. (deg R):	495.3811	496.4141	501.1784	506.7825	512.1643	516.0734	518.2403	517.0403	513.2500	507.9961	502.9020	497.6063
Daily Min. Liquid Surface Temp. (deg R):	492.2754	492.8009	497.0219	501.7929	506.7080	510.4283	512.6591	511.8146	508.5292	503.9001	499.8728	494.8502
Daily Max. Liquid Surface Temp. (deg R):	498.4868	500.0272	505.3349	511.7720	517.6206	521.7184	523.8215	522.2860	517.9708	512.0921	505.9314	500.3623
Daily Ambient Temp. Range (deg. R):	13.6000	14.8000	15.7000	18.3000	19.2000	19.2000	18.9000	18.5000	18.0000	17.0000	13.3000	12.4000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Vapor Space Outage (ft):	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667	3.1667
Working Losses (lb):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Vapor Molecular Weight (lb/lb-mole):	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000	190.0000
Vapor Pressure at Daily Average Liquid												

Surface Temperature (psia):	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Net Throughput (gal/mo.):	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000	150.0000
Annual Turnovers:	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700	3.2700
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Maximum Liquid Volume (gal):	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000	550.0000
Maximum Liquid Height (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Tank Diameter (ft):	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000	5.5000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0002	0.0003	0.0003	0.0003	0.0004	0.0004	0.0004	0.0004	0.0003	0.0003	0.0002	0.0002

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

ST04 - Vertical Fixed Roof Tank
Dimock Township, Pennsylvania

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Lube Oil	0.00	0.00	0.00

TANKS 4.0.9d
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

Tank Identification				Losses (lbs)
ST01	Laser Northeast Gathering Company, LLC	Vertical Fixed Roof Tank	Dimock Township, Pennsylvania	2,025.99
ST02	Laser Northeast Gathering Company, LLC	Vertical Fixed Roof Tank	Dimock Township, Pennsylvania	0.00
ST03	Laser Northeast Gathering Company, LLC	Vertical Fixed Roof Tank	Dimock Township, Pennsylvania	1.11
ST04	Laser Northeast Gathering Company, LLC	Vertical Fixed Roof Tank	Dimock Township, Pennsylvania	0.00
Total Emissions for all Tanks:				2,027.10

SHIELDS COMPRESSOR STATION
CO_2e Calculations
Revised Date: 07/26/2011
SUSQUEHANNA PIPELINE
Engine Input Maximum Operating Parameters (individual engine emissions)

Description / Item		EPN	SC161	SC162	SC163	SC164	SD01	SD02	SD03		
		Make	CAT	CAT	CAT	CAT					
		Model	3616	3616	3616	3616	Reboiler	Reboiler	Reboiler		Totals
Engine RPM =			1,000	1,000	1,000	1,000					
Fuel Consumption Factor (Btu/bph-hr) =			6,732	6,732	6,732	6,732					
Engine BHp Rating =			4,735	4,735	4,735	4,735					
HEAT INPUT RATING (MMBTU/HR)			31.9	31.9	31.9	31.9	0.5	0.5	0.5		
FUEL CONSUMPTION (MMSCF/YR)			271.10	271.10	271.10	271.10	4.32	4.32	4.32		
FUEL CONSUMPTION (MMBTU/YR)			279,234	279,234	279,234	279,234	4,450	4,450	4,450		
Fuel Heating Value (Btu/SCF) =			1,030	1,030	1,030	1,030	1030	1030	1030		
Exhaust Gas Temperature (F) =			876	876	876	876					
Exhaust Gas Flow (lb/hr) =			58,624	58,624	58,624	58,624					
Fuel Gas Molecular Weight (lb/lb-mole) =			17.163	17.163	17.163	17.163					
For Exhaust Gas, K =			2.275	2.275	2.275	2.275					
Engine Fuel Consumption (SCF/hr) =			31,466.950	31,466.950	31,466.950	31,466.950					125,867.800
Engine Fuel Consumption (lb/hr) =			1,424.938	1,424.938	1,424.938	1,424.938					5,699.752
Compression Limit (Hp-hr/yr) =			41,478,600	41,478,600	41,478,600	41,478,600					165,914,400
Engine Exhaust Gas Flow (CF/min) =			32,100	32,100	32,100	32,100					
Engine Exhaust Gas Flow (CF/hr) =			1,926,000	1,926,000	1,926,000	1,926,000					
Stack Exit Velocity (ft/sec) =			109.04	109.04	109.04	109.04					
Engine % Utilization =			100%	100%	100%	100%	100%	100%	100%		
Stack Diameter (ft) =			2.5	2.5	2.5	2.5	1	1	1		
Emission Limited Per Engine (yes / no)			no	no	no	no					
Atmospheric Pressure (psia)			14.7	14.7	14.7	14.7					
Emission Factors: (grams/Hp-hr)										Emission Factor Source	
	CO_2 (kg CO_2/mmBtu)		53.02	53.02	53.02	53.02	53.02	53.02	53.02	40 CFR Part 98	
	CO_2 (lb CO_2/mmBtu)		116.89	116.89	116.89	116.89	116.89	116.89	116.89	40 CFR Part 98	
	CH_4 (lb CH_4/mmBtu)		0.011014	0.011014	0.011014	0.011014	0.011014	0.011014	0.011014	40 CFR Part 98	
	N_2O (lb N_2O/mmBtu)		0.000022	0.000022	0.000022	0.000022	0.000022	0.000022	0.000022	40 CFR Part 98	
	CO_2 (tons/yr)		16,320	16,320	16,320	16,320	260	260	260		
	CH_4 (tons/yr)		1.53774	1.53774	1.53774	1.53774	0.02450	0.02450	0.02450		
	N_2O (tons/yr)		0.00307	0.00307	0.00307	0.00307	0.00005	0.00005	0.00005		
Combustion	**CO_2e (tons/yr)**		**16,353**	**16,353**	**16,353**	**16,353**	**261**	**261**	**261**		**66,193**
	CH_4 (tons/yr)									598	
Process (Dehydrators)	**CO_2e (tons/yr)**									12,557	12,557
TOTAL	**CO_2e (tons/yr)**										**78,750**

Receipt of Plan Approval Applications and Intent to Issue Plan Approvals, and Intent to Issue Amended Operating Permits under the Air Pollution Control Act and 25 Pa. Code Chapter 127, Subchapter B And Subchapter F. These actions may include the administrative amendments of an associated operating permit.

Northeast Region: Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18711-0790

Contact: Ray Kempa, New Source Review Chief—Telephone: 570-826-2507

58-399-023: Laser Northeast Gathering Company LLC (333 Clay Street, STE 4500, Houston, TX 77002-4102) for their facility to be in Dimock Township, **SusquehannaCounty**.

In accordance with 25 Pa. Code §§ 127.44(a) and 127.45(a), the Department of Environmental Protection (DEP) has received and intends to issue a Plan Approval to Laser Northeast Gathering Company LLC (333 Clay Street, Ste. 4500, Houston, TX 77002-4102) for their facility to be located in Dimock Township, Susquehanna County. This Plan Approval No. 58-399-023 will be incorporated into a Synthetic Minor Permit through an administrative amendment at a later date.

Plan Approval No. 58-399-023 is for the construction of a natural gas compressor station at the Shields Compressor Station. The station will consist of four CAT G3616 engines and three dehydrators with reboilers. The VOC emissions from the facility will not equal or exceed 50 TPY, based on a 12-month rolling sum. The NOx emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. Total PM, SOx, and CO emissions from the facility will not equal or exceed 100 TPY, based on a 12-month rolling sum. The HAPs from the facility must never equal or exceed 10 TPY of any single HAP and must never equal or exceed 25 TPY of all aggregated HAPs, based on a 12-month rolling sum. The Plan approval and Operating Permit will include testing, monitoring, record keeping and reporting requirements designed to keep the sources operating within all applicable air quality requirements.

The facility is subject to MACT 40 CFR Part 63 Subparts ZZZZ and HH, NSPS Subpart JJJJ and 25 PA Code § 127.12(a)(5) Best Available Technology (BAT) requirements. The visible emission opacity shall not be equal to or greater than 20% at any time. The company shall be subject to and comply with 25 PA Code § 123.31 for malodorous emissions.

Emissions from the engines will meet MACT Subpart ZZZZ, MACT Subpart HH, BAT & NSPS Subpart JJJJ requirements. The Plan Approval and Operating permit will contain additional recordkeeping and operating restrictions designed to keep the facility operating within all applicable air quality requirements.

Copies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program, 2 Public Square, Wilkes-Barre, PA 18701-1915.

Any person(s) wishing to provide DEP with additional information, which they believe should be considered prior to the issuance of this permit, may submit the information to the address shown in the preceding paragraph. Each written comment must contain the following:

Name, address and telephone number of the person submitting the comments.

Identification of the proposed permit No.: 58-399-023.

A concise statement regarding the relevancy of the information or objections to the issuance of the permit.

EXHIBIT 9

Clean Air Council

Philadelphia
135 South 19th Street
Suite 300
Philadelphia, PA 19103
215-567-4004
Fax 215-567-5791
E-Mail members@cleanair.org
www.cleanair.org

Harrisburg
107 N. Front St.
Suite 113
Harrisburg, PA 17101
717-230-8806
Fax 717-230-8808

Wilmington
Community Service Building
100 W. 10th St.
Suite 106
Wilmington, DE 19801
302-691-0112

October 3, 2011

Via Electronic and First Class Mail

Ray Kempa
Chief, New Source Review Section
Air Quality Program
Pennsylvania Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18701-1915

Re: Laser Northeast Gathering Co., LLC
Plan Approval No. 58-399-023

Dear Mr. Kempa,

Clean Air Council ("Council" or "Commenters") hereby submits the following comments in response to the Pennsylvania Department of Environmental Protection's ("PA DEP") notice of receipt and intent to issue Plan Approval No. 58-399-023 to Laser Northeast Gathering Company LLC ("Laser") for their facility to be located in Susquehanna County, Pennsylvania.

Plan Approval No. 58-399-023 is for the construction of a natural gas compressor station at the Shields Compressor Station in Dimock Township. The station will consist of four CAT G3616 engines and three dehydrators with reboilers.

Clean Air Council is a non-profit environmental organization headquartered at 135 S. 19th St., Suite 300, Philadelphia PA 19103. The Council has members throughout Pennsylvania. For more than 40 years, the Council has fought to improve the air quality across Pennsylvania. The Council's mission is to protect everyone's right to breathe clean air.

Background/Introduction:

On August 4, 2011, PA DEP received Plan Approval application 58-399-023 ("Laser Plan Approval") from Laser. PA DEP published notice of receipt of the Laser Plan Approvals and the

intent to issue them in the September 3, 2011, *Pennsylvania Bulletin*. Comments for this Plan Approvals are due October 3, 2011.

Comments:

1. PA DEP Failed to Provide the Public with Adequate Opportunity to Comment.

PA DEP did not comply with its notification in the *Pennsylvania Bulletin* for the Laser Plan Approval, the Pennsylvania Code or the Pennsylvania State Implementation Plan ("SIP"). PA DEP must therefore extend the comment period until copies of the application, proposed plan approval, PA DEP's analysis and other documents used in the evaluation of the application can be made available to the public for review.

In accordance with 25 PA CODE § 127.45(a)(6) (2008), the notice of receipt and intent to issue for each plan approval must include a statement that a person may oppose the proposed plan approval by filing a written protest with the PA DEP. This requirement necessitates that the public have access to the proposed plan approval during the comment period.

PA DEP must also prepare a notice for each action taken on a plan approval, including receipt, intent to issue, and issuance, in accordance with the requirements of 25 PA CODE § 127.45(b) (2008), where PA DEP has determined that there is substantial public interest. The Council would like to know what efforts PA DEP made with respect to the Laser Plan Approval, to determine whether there is substantial public interest and further invites PA DEP to make that determination. The Council, and its members, certainly have a substantial interest in the permitting of this compressor station.

The notice in the *Pennsylvania Bulletin* for the Laser Plan Approval indicates that "[c]opies of the application, DEP's analysis and other documents used in the evaluation of the application are available for public review during normal business hours at Air Quality Program..."[1] PA DEP's analysis and other documents used in the evaluation of the applications were not made available to the Clean Air Council despite the Council's request to review them.

Further, the rules for notification cited by PA DEP are inconsistent with Pennsylvania's federally approved SIP. On May 24, 2008, the Environmental Quality Board ("EQB") set forth "Air Quality Permit Streamlining" in the *Pennsylvania Bulletin*.[2] The EQB approved rules reduced the notice requirements for minor source permits. The "Air Quality Permit Streamlining" notice indicated that "[t]he final-form rulemaking will be submitted to the United States Environmental Protection Agency (EPA) as a revision to Pennsylvania's [SIP] codified in 40 CFR 52.2020 (relating to identification of the plan)."[3] Further, the Board acting under authorizing statutes ordered that: "[t]his final-form rulemaking will be submitted to the EPA as an amendment to the

[1] 41 Pa.B. 3870 (July 16, 2011).
[2] 38 Pa.B. 2365 (May 24, 2008).
[3] *Id.*

Pennsylvania [SIP]."[4] However, this rulemaking was never submitted to the EPA and the current Pennsylvania SIP reflects the rules effective as of November 26, 1994.[5]

The Pennsylvania SIP requires that "[t]he Department will prepare a notice of action to be taken on applications for plan approvals for the following: ...sources required to obtain plan approval."[6] This would require notification in accordance with § 127.45 of the Pennsylvania SIP when *any* action is taken on a plan approval application.

PA DEP did not provide notice in accordance with its own July 16, 2011, *Pennsylvania Bulletin* notice, the Pennsylvania Code or the Pennsylvania SIP. The Council requests that the PA DEP extend the comment period until copies of the application, proposed plan approval, PA DEP's analysis and other documents used in the evaluation of the application can be made available to the public for review.

2. PA DEP Must Perform a Proper Single-Source Determination.

An accurate source determination is an absolute prerequisite to an adequate demonstration that PA DEP is in compliance with New Source Review ("NSR"), Prevention of Significant Deterioration ("PSD") and the Title V Permit program. The provisions of PA DEP's NSR, PSD and Title V Permit program are approved by the EPA incorporated in Pennsylvania's SIP at 40 CFR Part 52.2020. Because the federal PSD requirements promulgated by the EPA are adopted and incorporated by reference in their entirety PA DEP must apply EPA guidance consistently and properly in interpreting and implementing the Commonwealth's Air Program.[7]

On September 22, 2009, Gina McCarthy, Assistant Administrator for the EPA's Office of Air and Radiation, issued a memo entitled "Withdrawal of Source Determinations for Oil and Gas Industries" to Regional Administrators, which emphasized a fact-specific case-by-case approach for single source determinations. In making source determinations in the oil and gas industry, permitting authorities should rely foremost on the three regulatory criteria for identifying emissions activities that belong to the same "building," "structure," "facility," or "installation." The three regulatory criteria are: (1) whether the activities are under the control of the same person (or persons under common control); (2) whether the activities are located on one or more contiguous or adjacent properties; and (3) whether the activities belong to the same industrial grouping.[8]

In the recent decision *In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station,* EPA Administrator Jackson provides guidance on single source determinations in the natural gas context:

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[4] *Id.*

[5] 61 FR 39597 (July 30, 1996).

[6] *Id.*

[7] 25 Pa. Code § 127.83. These regulatory provisions were adopted June 17, 1983, effective June 18, 1983, 13 Pa.B. 1940.

[8] *See* 40 CFR § 52.21.

> In order to do a thorough analysis, I [EPA Administrator, Lisa P. Jackson] recommend that CDPHE [Colorado Department of Public Health and Environment] evaluate Kerr-McGee's complete system map showing all emission sources owned or operated by the Company in the Wattenberg gas field (located primarily in Weld County, Colorado) and determine whether the various pollution-emitting activities are contiguous or adjacent to, and under common control with, the Frederick Compressor Station...I also recommend that CDPHE obtain from Kerr-McGee/Anadarko a flow diagram showing the movement of gas from the well sites to the various facilities in the Wattenberg field operated by both Kerr-McGee/Anadarko and other companies in the field, so that CDPHE may determine the nature of the sources' emissions and determine whether or not the process units associated with those emission sources are interdependent on the operation of the Frederick Compressor Station. Finally, I recommend that CDPHE obtain from Kerr-McGee/Anadarko business information regarding the nature of control of the Frederick Station and nearby wells between the Company and other companies in the field to determine whether various pollution emitting activity should be considered under common control for purposes of making the source determination.[9]

PA DEP must first determine what air emission sources Laser owns in the areas surrounding the proposed compressor station, including but not limited to, the compressor engines already active at Shields Compressor Station, wells, processing plants, tanks and the various engines associated with the extraction and production of natural gas. PA DEP must then determine how these various sources, including but not limited to, the proposed compressor station are interconnected and dependent upon one another. Once the facility is properly defined, PA DEP must determine the potential to emit and whether it meets the major facility threshold.

3. PA DEP Must Comply with the GHG Tailoring Rule.

The Council urges PA DEP to evaluate and address greenhouse gas ("GHG") emissions when evaluating the Laser Plan Approvals, in accordance with the GHG Tailoring Rule.

On May 13, 2010, the U.S. EPA issued a final rule addressing GHG emissions from stationary sources under the CAA permitting programs. This Tailoring Rule set thresholds for GHG emissions that define when permits under the NSR/PSD and Title V Operating Permit programs are required for new and existing industrial facilities. The Tailoring Rule addresses emissions of a group of six GHGs, including methane ("CH_4") and carbon dioxide ("CO_2").

The Tailoring Rule provisions, codified in 40 CFR § 52.21, were automatically adopted and incorporated by reference in the *Pennsylvania Code* and became effective in the Commonwealth on August 2, 2010.

During Step 1 of this Rule, which began on January 1, 2011, only sources currently subject to the PSD permitting program were subject to permitting requirements for their GHG emissions under PSD. Step 2 began on July 1, 2011 and will last until June 30, 2013. During this Step, PSD permitting requirements will cover new construction projects that emit GHG emissions of at least

[9] *In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station,* Petition VII-2008-02 (Order on Petition) (Oct. 8, 2009).

100,000 CO_2 equivalent ("CO_2e") tons per year ("tpy"), even if they do not exceed the permitting thresholds for any other pollutant. Modifications at existing facilities that increase GHG emissions by at least 75,000 tpy CO_2e will be subject to permitting requirements, even if they do not significantly increase emissions of any other pollutant.

CH_4 is the major component of natural gas and twenty times more potent a GHG than CO_2e. Title V will be triggered for a new source at approximately 5,000 tpy of CH_4 and for an existing facility at approximately 3,750 tpy. Emissions of GHGs from natural gas operations include indirect emissions of CO_2 from fossil fuels used to extract, develop, and transport the gas and CH_4 from fugitive emissions and venting. The application indicates that PA DEP has not required, and Laser has not provided, the potential to emit GHGs for the proposed compressor station. To make an accurate source determination, PA DEP must know the potential to emit GHGs at the Laser compressor station.

4. The Council Urges PA DEP to Require Laser to Install Proven and Commercially Available Control Technology and Undertake Best Management Practices.

Oil and gas operations, including exploration, production and processing operations, consist of many pieces of equipment and practices that release air pollutants known to be harmful to public health and welfare. The impact on air quality includes emissions of volatile organic compounds (VOCs), nitrogen oxide, particulates and hazardous air pollutants. VOCs and nitrogen oxides mix in the air with sunlight to produce ground-level ozone, which causes a variety of respiratory problems, while the emission of hazardous air pollutants is linked to elevated levels of cancer and neurological health issues.

The impacts of oil and gas development on air quality are by no means insignificant. Areas of the country that have more fully developed their shale plays are experiencing significant effects from the cumulative impacts of oil and gas production:

- A 2009 Southern Methodist University study found summertime emissions of smog-forming pollutants from the oil and gas sector in the Dallas-Fort Worth area exceed emissions from motor vehicles.[10]
- A 2008 analysis by the Colorado Department of Public Health and Environment concluded that smog-forming emissions from Colorado's oil and gas operations exceed vehicle emissions for the entire state.[11]
- In 2009, for the first time in the state's history, Wyoming failed to meet federal health-based standards for air pollution. According to the Wyoming Department of Environmental Quality, emissions from the state's growing oil and gas sector are to blame.[12]

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[10] Al Armendariz, Emissions from Natural Gas Production in the Barnett Shale Area and Opportunities for Cost-Effective Improvements (Jan. 26, 2009), *available at:* http://www.edf.org/documents/9235_Barnett_Shale_Report.pdf.

[11] Colorado Dept. of Public Health & Environment, Air Pollution Control Division, Oil and Gas Emission Sources Presentation for the Air Quality Control Commission Retreat (May 15, 2008) at pages 3-4.

[12] WYDEQ, Technical Support Document I for Recommended 8-Hour Ozone Designation For the Upper Green River Basin, WY, p. viii (Mar. 26, 2009), *available at:*

- In northeastern Utah, unprecedented ozone levels in the Uintah Basin were recorded last year, and the Bureau of Land Management has identified the multitude of oil and gas wells in the region as the primary cause of the ozone pollution.[13]
- An April 2011, report from the Texas Oil and Gas Accountability Project, gives voice to the families and communities on the front lines of a public health crisis that is spreading from the Barnett Shale region in North Central Texas to other parts of the state. It pulls together detailed results of air and water testing as well as health effects data linking residents' symptoms to toxic chemicals used in drilling and hydraulic fracturing.[14]
- Cornell ecologist, Robert Howarth, in a recent study, found that methane (a potent global warming gas) leakage from hydraulic fracturing offsets the lesser carbon emissions that burning natural gas gives off in comparison to other fossil fuels. While natural gas has been touted as a clean-burning fuel that produces less carbon dioxide than coal, Howarth warns that we should be more concerned about methane leaking into the atmosphere during hydraulic fracturing.[15]

The Clean Air Council urges PA DEP to perform a thorough review of best management practices and control technologies and require those that will reduce these harmful effects to the greatest extent possible.

Conclusion:

First, governmental decisions in a democracy should be transparent. Transparency enables citizens to influence policy outcomes and to trust and accept the final decision. Transparency is especially critical for governmental decisions that promote public health and welfare, such as those made under federal and state environmental laws. Access to information is the foundation of transparency in environmental decision-making. The PA DEP has indicated in a policy memorandum that they recognize the value and power of information.[16] The PA DEP also notes its commitment to improving public access to environmental information and fostering public participation in environmental decision-making.[17] In accordance law and this policy, the Council urges PA DEP to make the proposed plan approval(s), PA DEP's analysis and other documents used in the evaluation of the applications available for public comment.

Second, oil and gas operations, including exploration, production, and processing operations, consist of many pieces of equipment and practices that release a number of air pollutants known

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http://deq.state.wy.us/out/downloads/Ozone%20TSD_final_rev%203-30-09_jl.pdf.

[13] Scott Streater, Air Quality Concerns May Dictate Uintah Basin's Natural Gas Drilling Future, N.Y. Times, Oct. 1, 2010, *available at*: http://www.nytimes.com/gwire/2010/10/01/01greenwire-air-quality-concerns-may-dictate-uintah-basins-30342.html?pagewanted=1.

[14] Texas Oil & Gas Accountability Project, Earthworks, Natural Gas Flowback: How the Texas Natural Gas Boom Affects Health and Safety (Apr. 2011) *available at*: http://earthworksaction.org/FLOWBACK-TXOGAP-HealthReport-lowres.pdf.

[15] Robert W. Howarth, et al., Methane and the greenhouse-gas footprint of natural gas from shale formations, a letter, Climactic Change (Apr. 12, 2011) *available at*: http://www.springerlink.com/content/e384226wr4160653/fulltext.pdf.

[16] Public Access to Information and Right to Know Law Policy (DEP ID: 012-0200-005) (June 3, 2010).

[17] *Id.*

to be harmful to public health and welfare. Ensuring that pollutant emitting activities associated with oil and gas operations are aggregated together, where appropriate, is necessary to ensure that required pollution controls are installed and to ensure greater accountability to protecting health and welfare-based air quality standards.

Finally, PA DEP must request information regarding the potential to emit GHGs in accordance with the GHG Tailoring Rule and should engage in a full review of and require the best available control technology and best management practices as conditions to the Laser Plan Approval.

Thank you for the opportunity to comment. Please keep us apprised of any future actions related to proposed Plan Approval No. 58-399-023.

Sincerely,

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